

# AGRICULTURE AND NATURAL RESOURCES DIVISION

# **Arable and Fruit Pest and Disease Status Review**

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# Pests and diseases of summer crops grown in open fields, October to April

Crop	Pests and diseases	Manageme	ent	Observations
		Biological	Chemical	
Brassicas: <b>cabbage</b> , broccoli, cauliflower	Caterpillars: cutworm, armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Cabbage aphid	Diaeretiella rapae	Danadim	Biocontrol often doesn't give control
	Diamondback moth	Cotesia plutella and Diadromus collaris	Dipel	
	Leaf hopper		Ripcord, Toppel 100EC	
	Leafminer	Diglyphus begini		Under effective biocontrol
	Black rot			Practise crop rotation
	Ringspot			
Potato	Caterpillars: cutworm, armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control
	Potato tuber moth	Copidosoma sp. and Diadegma sp.	Ripcord, Toppel 100EC	Biocontrol often doesn't give control
	Broadmite		Dynamec	
	Chafer beetle		Ripcord, Toppel 100EC	
	White fly	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Root mealybug			
	Bacterial wilt			Practise crop husbandry – crop rotation, resistant varieties, intercropping
	Early blight		Sanlaxyl, Bravo, Odeon	Use resistant varieties
	Late blight		Sanlaxyl, Bravo, Odeon	Use resistant varieties
	Common scab			Practise crop husbandry – crop rotation, resistant varieties
	Nematode		Oxamyl	Practise crop husbandry – crop rotation, resistant varieties

# Pests and diseases of summer crops grown in open fields, October to April, continued

Crop	Pests and diseases	Management		Observations
		Biological	Chemical	
Cucurbits: pumpkin, cucumber, squash	Caterpillars: cutworm, armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Aphid	Diaeretiella rapae	Danadim	Biocontrol often doesn't give control
	Leaf hopper		Ripcord, Toppel 100EC	
	Pumpkin fly	Psytallia phaeostigma	Leybacid	Biocontrol doesn't give good control
	White fly	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Red spider mite		Dynamec	
	Thrip		Danadim	
	Powdery mildew		Nimrod	
Tomato, aubergine, sweet pepper	Caterpillars: cutworm, armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Aphid			
	Broadmite		Dynamec	
	Red spider mite			
	Medfly		Leybacid, Ripcord	
	White fly	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Bacterial wilt			Practise crop husbandry – crop rotation, resistant varieties, intercropping
	Late blight		Sanlaxyl, Bravo, Odeon	Use resistant varieties

### Pests and diseases of summer crops grown in open fields, October to April, continued

Crop	Pests and diseases	Management		Observations
		Biological	Chemical	
Peas and beans	Caterpillars: cutworm, armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Pea moth		Ripcord, Toppel 100EC	
	Aphid	Diaeretiella rapae	Danadim	Biocontrol often doesn't give control
	Red spider mite		Dynamec	
	Leaf hopper		Ripcord, Toppel 100EC	
	White fly	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Powdery mildew		Nimrod	
	Rust fungus			
Onion, leeks, garlic	Caterpillar: armyworm	Euplectrus plathypenae	Ripcord, Toppel 100EC	Biocontrol doesn't give good control
	Onion fly		Ripcord, Toppel 100EC	
	Thrip		Danadim	
Carrot	Crickets		Ripcord, Toppel 100EC	Also known as night fly
	Leafhopper		Danadim	
Sweet potato	Caterpillar: armyworm	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Sweet potato leafminer		Danadim	
Root crops: beetroot, radish,	Caterpillar: armyworm	Euplectrus plathypenae	Ripcord, Toppel 100EC	Chemical control good. Biocontrol doesn't give good control
turnip	Chafer beetle			
Leafy crops: lettuce, spinach, sweetcorn	Caterpillars: cutworm, armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.

### Pests and diseases of summer plants in the open, October to April

Crop	Pests and diseases	Management		Observations
		Biological	Chemical	
Ornamentals	Caterpillars: armyworm,	Euplectrus plathypenae	Ripcord, Toppel 100EC	Chemical control good, Dipel protects
	bollworm, looper		Dipel	natural enemies.
				Biocontrol doesn't give good control.
	Fullers rose weevil		Ripcord, Toppel 100EC	
	Jacaranda bug	Hyperaspis pantherina		Biological control good
	Australia bug	Rodolia cardinalis	Malathion	Biological control good
	Mealybugs, various spp		Malathion	
	Leafhoppers		Ripcord, Toppel 100EC	
	Pumpkin fly		Lebaycid	
	Rust fungus			
Lawn/pasture	Caterpillar: armyworm		Ripcord, Toppel 100EC	Late summer – early winter
General pests	Slugs and snails		Molluscicides	
	Rabbits			Fencing
	Pheasants			
	Crickets		Ripcord, Toppel 100EC	

# Pests and diseases of winter crops grown in open fields, May to September

Crop	Pests and diseases	Mar	nagement	Observations
		Biological	Chemical	
Brassicas: cabbage, broccoli, cauliflower	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Leafminer	Diglyphus begini		Under effective biocontrol
	Black rot		None	Practise crop rotation
	Ringspot		Copper oxychloride	
Potatoes	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Potato tuber moth	Copidosoma sp. and Diadegma sp.	Ripcord, Toppel 100EC	Biocontrol often doesn't give control
	White fly	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Bacterial wilt			Practise crop husbandry – crop rotation, resistant varieties, intercropping
	Early blight		Sanlaxyl, Bravo, Odeon	
	Late blight		Sanlaxyl, Bravo, Odeon	
	Common scab			Practise crop husbandry – crop rotation, resistant varieties, intercropping
	Nematode		Oxamyl	
Cucurbits: pumpkin, squash	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Powdery mildew		Nimrod	
Tomato, aubergine	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	White fly – Trialeuroides vaporariorium	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Bacterial wilt			Practise crop husbandry – crop rotation, resistant varieties, intercropping
	Late blight		Sanlaxyl, Bravo, Odeon	

Crops in **bold** indicate the most important for that season, pests and diseases in bold the most important for that crop

#### Pests and diseases of winter crops grown in open fields, May to September, continued

Crop	Pests and diseases		Management	Observations
		Biological	Chemical	
Peas	Caterpillars: armyworm,	Euplectrus plathypenae	Ripcord, Toppel 100EC	Chemical control good, Dipel protects
	bollworm, looper		Dipel	natural enemies.
				Biocontrol doesn't give good control.
	Pea moth		Ripcord, Toppel 100EC	
	White fly	Encarsia formosa	Resistant to pesticide	Biocontrol doesn't give good control
	Powdery mildew		Copper oxychloride	
	Rust			
	Thrip		Danadim	
Carrot	Crickets		Ripcord, Toppel 100EC	Also known as night fly
Sweet potato	Caterpillars: armyworm	Euplectrus plathypenae	Ripcord, Toppel 100EC	Chemical control good, Dipel protects
			Dipel	natural enemies.
				Biocontrol doesn't give good control.
Root crops:	Caterpillar: armyworm	Euplectrus plathypenae	Ripcord, Toppel 100EC	Chemical control good, Dipel protects
beetroot, parsnip,			Dipel	natural enemies.
turnip				Biocontrol doesn't give good control.

# Pests and diseases of winter plants in the open, May to September

Crop	Pests and diseases Management		Observations	
		Biological	Chemical	
Ornamentals	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Fullers rose weevil			
	Jacaranda bug	Hyperaspis pantherina		Biological control good
	Australia bug	Rodolia cardinalis	Malathion	Biological control good
	Mealybugs, various spp			
	Rust			
Lawn / pasture	Caterpillar: lawn armyworm		Ripcord, Toppel 100EC	Late summer – early winter
General pests	Crickets		Ripcord, Toppel 100EC	
	Rabbits			Fencing
	Pheasants			

### Pests and diseases of Tree crops

Crop	Pests and diseases	Management		Observations
		Biological	Chemical	
Citrus fruit	Citrus psyllid	Tamarixia dryi		Biocontrol doesn't give good control
	Citrus woolly whitefly	Cales noaki		Biocontrol doesn't give good control
	Medfly			
	False codling moth			
	Scale insects			
Stone fruit:	MedFly	Fopius ceratitivorous	Lebaycid	Biocontrol doesn't give good control
peaches, plums		Psytallia concolour		Biocontrol doesn't give good control
	False codling moth		Lebaycid	
	Scale insect		Lebaycid	
	Peach leaf curl			
	Fruit rot			Secondary affect
Coffee	Medfly	Fopius ceratitivorous		Does not affect quality so of no economic
		Psytallia concolour		importance
	Scale insect, various spp.			
	Caterpillar: Opogona			Secondary pest, affects dead wood

### Pests and diseases of crops grown under covered production

Crop	Pests and diseases	1	Management	Observations
		Biological	Chemical	
Cucumber	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Aphid	Diaeretiella rapae	Danadim	Biocontrol often doesn't give control
	Leaf hopper	·	Ripcord, Toppel 100EC	
	Pumpkin fly	Psytallia phaeostigma	Leybacid	Biocontrol doesn't give good control
	White fly	Encarsia formosa	Naturalis-L, Mycotal, Oberon	Biocontrol gives good control at 80% parasitism or over
	Thrip		Danadim, Naturalis-L	
	Red spider mite		Danadim, Borneo	
	Rust mite		Dynamec, Borneo	
	Powdery mildew		Nimrod	
Tomato	Caterpillars: armyworm, bollworm, looper	Euplectrus plathypenae	Ripcord, Toppel 100EC Dipel	Chemical control good, Dipel protects natural enemies. Biocontrol doesn't give good control.
	Aphid	Diaeretiella rapae	Danadim	Biocontrol often doesn't give control
	Medfly		Lebaycid	
	White fly	Encarsia formosa	Naturalis-L, Mycotal, Oberon	Biocontrol gives good control at 80% parasitism or over
	Thrip		Danadim	
	Red spider mite		Danadim	
	Rustmite		Dynamec	
	Bacterial wilt			Practise crop husbandry – crop rotation resistant varieties, intercropping
	Early blight		Sanlaxyl, Bravo, Odeon	

# Crop pests and diseases of St Helena

Common name	Latin name	
Butterflies and moths	Lepidoptera	
Cutworm	Agrotis segetum and A. ipsilon	
Armyworm	Spodoptera littoralis	
Lawn armyworm	Spodoptra sp.	
Bollworm	Helicoverpa armigera	
Looper	Plusia orichalcea and P. limbrina	
Diamondback moth	Plutella xylostella	
Potato tuber moth	Phthorimea operculella	
False codling moth	Cryptohlebia leucotetra	
Pea moth	Lamides boeticus	
Bugs and scales	Homoptera	
Peach potato aphid	Myzus persicae	
Black aphid	Aphis gossipii	
Cabbage aphid	Brevicoryne brassicae	
Australia bug	Icerya purchasi	
Jacaranda bug	Orthezia insignis	
Mealybug	Pseudococcus malacaerum, P. maritimus	
Mealybug	Planococcus citri	
Scale insects	Coccus	
Scale insects	Saissetia	
Citrus psyllid	Trioza erytreae	
Citrus woolly white fly	Aleurothrixus floccosus	
Whitefly	Aleuroides sp	
Whitefly	Trialeuroides vaporariorum	
Onion thrip	Thrips tabaci	
Leafhopper	Empoasca sp	
Beetles	Coleoptera	
Fullers rose weevil	Asonychus cervinus	,
Chafer beetle	Mylabis oculata	,

Leafminer  Sweet potato leafminer  Bedellia somnulentella  Onion fly  Delia antiqua  Mediterranean fruitfly  Ceratitis capitata  Pumpkin fly  Dacus cillatus  Crickets  Gryllidae  Bush cricket  Gryllus, sp.  Mites  Acaridae  Red spider mite  Polyphagotarsonemus latus  Rust mite  Aculops lycopersia  Molluscs  Slug  Milax gagates  Snail  Helix aspersa  Mematodes  Cyst nematodes  Giobodera sp  Bacterial conditions  Wilt  Pseudomonas solanacearum  Malak rot  Xanthomonas campestris  Common scab  Streptomyces scabei  Fungal conditions  Fungal conditions  Rust  Rust  Rust  Late blight  Phytophthora infestans  Powdere mildeu  Erysiphe cichoracearum  Rust  Ringspot  Mycosphaerella brassicicola	Flies	Diptera
Onion fly Delia antiqua Fruit flies Tephritidae  Mediterranean fruitfly Ceratitis capitata Pumpkin fly Dacus cillatus  Crickets Gryllidae  Bush cricket Gryllus, sp.  Mites Acaridae  Red spider mite Tetranychus urticae Broadmite Polyphagotarsonemus latus Rust mite Aculops lycopersia  Molluscs Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions  Fungal conditions  Fungal conditions  Rust Uromyces sp, Phragmidium sp.	Leafminer	Liriomyza brassicae
Fruit files  Mediterranean fruitfly Ceratitis capitata Pumpkin fly Dacus cillatus  Crickets Gryllidae Bush cricket Gryllus, sp.  Mites Acaridae Red spider mite Polyphagotarsonemus latus Rust mite Aculops lycopersia  Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Common scab Streptomyces scabei  Fungal conditions Fundativis Alternaria solani Late blight Phytophthora infestans Pragmiduse Cryst nematodew Erysiphe cichoracearum Rust Prowdery mildew Erysiphe cichoracearum Rust Crychaginativa Aculops lycopersia	Sweet potato leafminer	
Mediterranean fruitfly Pumpkin fly Dacus cillatus  Crickets Gryllidae Bush cricket Gryllus, sp.  Mites Acaridae Red spider mite Polyphagotarsonemus latus Rust mite Aculops lycopersia  Milax gagates Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Common scab Streptomyces scabei  Fungal conditions Fungal conditions Fungal conditions Fungal conditions Fungal conditions Fungal conditions Frysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.	Onion fly	Delia antiqua
Pumpkin fly  Crickets  Bush cricket  Gryllidae  Red spider mite  Broadmite  Polyphagotarsonemus latus  Aculops lycopersia  Milax gagates  Slug  Milax gagates  Snail  Helix aspersa  Nematodes  Cyst nematodes  Globodera sp  Wilt  Pseudomonas solanacearum  Black rot  Common scab  Streptomyces scabei  Fungal conditions  Fungal conditions  Fungal conditions  Fungal conditions  Powdery mildew  Erysiphe cichoracearum  Rust  Rust  Gryllidae  Gryllidae  Gryllus, sp.  Acaridae  Tetranychus urticae  Petranychus urticae  Netranychus urticae  Acaridae  Acaridae  Acaridae  Acaridae  Tetranychus urticae  Polyphagotarsonemus latus  Aculops lycopersia  Helix aspersa  Globodera sp  Streptomyces solanacearum  Streptomyces scabei  Fungal conditions  Fungal conditions  Erysiphe cichoracearum  Rust  Uromyces sp, Phragmidium sp.	Fruit flies	Tephritidae
Crickets Bush cricket Gryllus, sp.  Mites Red spider mite Polyphagotarsonemus latus Rust mite Aculops lycopersia  Molluscs Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei Fungal conditions Fungal conditions Fungal conditions Phytophthora infestans Powdery mildew Erysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.	Mediterranean fruitfly	Ceratitis capitata
Bush cricket  Gryllus, sp.  Mites  Red spider mite  Broadmite  Polyphagotarsonemus latus  Rust mite  Aculops lycopersia  Milax gagates  Slug  Milax gagates  Snail  Helix aspersa  Vest nematodes  Globodera sp  Wilt  Pseudomonas solanacearum  Black rot  Xanthomonas campestris  Common scab  Streptomyces scabei  Fungal conditions  Fungal conditions  Powdery mildew  Erysiphe cichoracearum  Rust  Uromyces sp, Phragmidium sp.	Pumpkin fly	Dacus cillatus
Bush cricket  Gryllus, sp.  Mites  Red spider mite  Broadmite  Polyphagotarsonemus latus  Rust mite  Aculops lycopersia  Milax gagates  Slug  Milax gagates  Snail  Helix aspersa  Vest nematodes  Globodera sp  Wilt  Pseudomonas solanacearum  Black rot  Xanthomonas campestris  Common scab  Streptomyces scabei  Fungal conditions  Fungal conditions  Powdery mildew  Erysiphe cichoracearum  Rust  Uromyces sp, Phragmidium sp.		
Mites Acaridae  Red spider mite Tetranychus urticae  Broadmite Polyphagotarsonemus latus Rust mite Aculops lycopersia  Molluscs  Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions  Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Erysiphe cichoracearum Rust  Wire Tetranychus urticae Tetranyc	Crickets	Gryllidae
Red spider mite Broadmite Polyphagotarsonemus latus Rust mite Aculops lycopersia  Molluscs Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions Early blight Alternaria solani Late blight Powdery mildew Erysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.	Bush cricket	Gryllus, sp.
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Rust mite Aculops lycopersia  Molluscs  Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions  Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Rust Uromyces sp, Phragmidium sp.	Red spider mite	· · · · · · · · · · · · · · · · · · ·
Molluscs  Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Rust Uromyces sp, Phragmidium sp.	Broadmite	
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Slug Milax gagates Snail Helix aspersa  Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Erysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.		
Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Erysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.		
Nematodes Cyst nematodes Globodera sp  Bacterial conditions Wilt Pseudomonas solanacearum Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Erysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.		
Cyst nematodes  Globodera sp  Bacterial conditions  Wilt Pseudomonas solanacearum  Black rot Xanthomonas campestris  Common scab Streptomyces scabei  Fungal conditions  Early blight Alternaria solani  Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.	Snail	Helix aspersa
Cyst nematodes  Globodera sp  Bacterial conditions  Wilt Pseudomonas solanacearum  Black rot Xanthomonas campestris  Common scab Streptomyces scabei  Fungal conditions  Early blight Alternaria solani  Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.		
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Wilt Pseudomonas solanacearum  Black rot Xanthomonas campestris  Common scab Streptomyces scabei  Fungal conditions  Early blight Alternaria solani Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.	Cyst nematodes	Globodera sp
Wilt Pseudomonas solanacearum  Black rot Xanthomonas campestris  Common scab Streptomyces scabei  Fungal conditions  Early blight Alternaria solani Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.		
Black rot Xanthomonas campestris Common scab Streptomyces scabei  Fungal conditions Early blight Alternaria solani Late blight Phytophthora infestans Powdery mildew Erysiphe cichoracearum Rust Uromyces sp, Phragmidium sp.		
Common scab  Streptomyces scabei  Fungal conditions  Early blight Alternaria solani  Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.		
Fungal conditions  Early blight Alternaria solani Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.		·
Early blight Alternaria solani  Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.	Common scab	Streptomyces scabei
Early blight Alternaria solani  Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.	Fungal conditions	
Late blight Phytophthora infestans  Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.		Alternaria solani
Powdery mildew Erysiphe cichoracearum  Rust Uromyces sp, Phragmidium sp.		
Rust Uromyces sp, Phragmidium sp.		
	-	