

補充表一、腐黴菌在臺灣農作物感染的記錄¹⁾

Table S1. List of *Pythium* spp. disease records in Taiwan¹⁾

Crop 作物	Specie name 學名	Chinese disease name 病名	Pathogen 病原菌
玉米	<i>Zea mays</i>	莖腐病	<i>Pythium aphanidermatum</i>
		根腐病	<i>Pythium arrhenomanes</i>
		根腐病	<i>Pythium graminicolum</i>
菜豆/扁豆	<i>Phaseolus lunatus</i>	猝倒病	<i>Pythium aphanidermatum</i>
菜豆	<i>Phaseolus vulgaris</i>	猝倒病	<i>Pythium aphanidermatum</i>
豌豆	<i>Pisum sarivum</i>	根腐病	<i>Pythium aphanidermatum</i>
茼蒿	<i>Chrysanthemum coronarium</i>	根腐病	<i>Pythium aphanidermatum</i> ²⁾
甘藷	<i>Ipomoea batatas</i>	白腐病	<i>Pythium spinosum</i>
丹參	<i>Salvia miltiorrhiza</i>	幼苗猝倒病	<i>Pythium splendens</i> ²⁾
百合	<i>Lilium brownii</i> var. <i>viridulum</i>	根腐病	<i>Pythium spinosum</i>
薑	<i>Zingiber officinale</i>	軟腐病	<i>Pythium myriotylum</i>
木瓜	<i>Carica papaya</i>	幼苗立枯病	<i>Pythium aphanidermatum</i> / <i>P. ultimum</i>
草莓	<i>Fragaria</i> × <i>ananassa</i>	腐黴菌萎凋病	<i>Pythium helicoides</i>
地黃	<i>Rehmannia glutinosa</i>	猝倒病	<i>Pythium splendens</i>
鳳仙花	<i>Impatiens balsamina</i>	根腐病	<i>Pythium splendens</i>

¹⁾ This table was summarized from the “List of plant diseases in Taiwan”

²⁾ Pathogens with this symbol have disease records in the same host genus

補充表二、露菌與疫病菌在臺的為害記錄與登記用藥情形¹⁾

Table S2. Disease records that show downy mildews and *Phytophthora* spp. infections as well as the fungicide registered use cases that target these pathogens¹⁾

Crop group / Crop 作物群/作物	Species name 學名	Downy mildews 露菌	Phytophthora spp. 疫病菌	
		Pathogen species name ²⁾ 病原菌種名 ²⁾	Pathogen species ²⁾ name 病原菌種名 ²⁾	Other Chinese disease name 其他中文病名
玉米	<i>Zea mays</i>	<i>Peronosclerospora sacchari</i>	N/A ³⁾	-
小米	<i>Setaria italica</i>	w/o R ⁵⁾	N/A	-
豆科乾豆類	-	R ⁵⁾	R	-
豆科豆菜類	-	R	R	-
豆科豆菜類幼苗	-	N/A	R	-
豆科小葉菜類	-	R	R	-
豆科小葉菜類 幼苗	-	N/A	R	-
豆科根莖菜類	-	R	R	-
豆科根莖菜類幼苗	-	N/A	R	-
大豆/毛豆	<i>Glycine max</i>	<i>Peronospora mancharica</i>	N/A	-
菜豆	<i>Phaseolus vulgaris</i>	w/o R	w/o R	-
綠豆	<i>Vigna radiata</i>	w/o R	N/A	-
豌豆/葉用豌豆	<i>Pisum sarivum</i>	w/o R	w/o R	-
豇豆	<i>Vigna sinensis</i>	w/o R	<i>Phytophthora vignae</i>	莖腐病
蠶豆	<i>Vicia faba</i>	<i>Peronospora viciae-sativae</i> ⁶⁾	w/o R	-
花豆	<i>Phaseolus coccineus</i>	w/o R	w/o R	-
樹豆	<i>Cajanus cajan</i>	w/o R	w/o R	-
刀豆	<i>Canavalia gladiata</i>	w/o R	w/o R	-
扁豆/菜豆	<i>Phaseolus lunatus</i>	w/o R	w/o R	-
翼豆	<i>Psophocarpus tetragonolobus</i>	w/o R	w/o R	-
豆薯	<i>Pachyrhizus erosus</i>	N/A	w/o R	-
黃耆	<i>Astragalus membranaceus</i>	w/o R	<i>Phytophthora drechleri</i> ⁶⁾	莖腐病

補充表二 (續)、露菌與疫病菌在臺的為害記錄與登記用藥情形¹⁾

Table S2 (continued). Disease records that show downy mildews and *Phytophthora* spp. infections as well as the fungicide registered use cases that target these pathogens¹⁾

Crop group / Crop 作物群/作物	Species name 學名	Downy mildews	Phytophthora spp.	
		露菌	疫病菌	Other Chinese disease name
		Pathogen species name ²⁾ 病原菌種名 ²⁾	Pathogen species ²⁾ name 病原菌種名 ²⁾	其他中文病名
闊葉大豆	<i>Glycine tomentella</i>	N/A	w/o R	-
狗尾草	<i>Uraria crinita</i>	N/A	w/o R	-
小葉菜類	-	R	R	-
果菜類 幼苗	-	N/A	R	-
果菜類	-	N/A	R	-
十字花科小葉菜類	-	R	N/A	-
十字花科包葉菜類	-	R	N/A	-
十字花科根莖菜類	-	R	N/A	-
結球白菜	<i>Brassica rapa</i> subsp. <i>pekinensis</i>	<i>Peronospora brassicae</i>	N/A	-
油菜	<i>Brassica campestris</i>	<i>Peronospora brassicae</i>	N/A	-
菊科葉菜類	-	R	N/A	-
菊科小葉菜類	-	R	R	-
菊科小葉菜類幼苗	-	N/A	R	-
茼蒿	<i>Chrysanthemum coronarium</i>	<i>Plasmopara chrysanthemi-coronari</i>	<i>Phytophthora cryptogea</i> ⁶⁾ / <i>Phytophthora nicotianae</i> ⁶⁾	根腐病
山茼蒿	<i>Crassocephalum crepidioides</i>	w/o R	w/o R	-
紅鳳菜	<i>Gynura bicolor</i>	w/o R	<i>Phytophthora cryptogea</i> / <i>Phytophthora drechsleri</i>	-
白鳳菜	<i>Gynura divaricata</i> subsp. <i>formosana</i>	w/o R	<i>Phytophthora cryptogea</i> ⁶⁾ / <i>Phytophthora drechsleri</i> ⁶⁾	-
菊科包葉菜類	-	R	R	-
不結球萵苣及半結球萵苣	<i>Lactuca sativa</i>	<i>Bremia elliptica</i> / <i>Bremia microspora</i> ⁶⁾	<i>Phytophthora cryptogea</i>	-
朝鮮薊	<i>Cynara scolymus</i>	w/o R	w/o R	-
芳香萬壽菊	<i>Tagetes lemmonii</i>	N/A	w/o R	-
闊包菊	<i>Pluchea indica</i>	N/A	w/o R	-
婆婆羅門參	<i>Tragopogon porrifolius</i>	N/A	w/o R	-
黑婆婆羅門參	<i>Scorzonera hispanica</i>	w/o R	N/A	-
牛蒡	<i>Arctium lappa</i>	w/o R	w/o R	-
山防風	<i>Echinops griffithii</i>	w/o R	w/o R	-
菊花	<i>Chrysanthemum</i> × <i>morifolium</i>	<i>Plasmopara chrysanthemi-coronari</i> ⁶⁾	<i>Phytophthora cryptogea</i>	根腐病
向日葵	<i>Helianthus annuus</i>	w/o R	N/A	-
洋甘菊	<i>Matricaria chamomilla</i>	w/o R	N/A	-
金盞花	<i>Calendula officinalis</i>	w/o R	N/A	-
艾草	<i>Artemisia argyi</i>	w/o R	N/A	-
風茹	<i>Glossogyne tenuifolia</i>	w/o R	N/A	-
蟛蜞菊	<i>Sphagneticola calendulacea</i> (<i>Wedelia chinensis</i>)	w/o R	N/A	-
咸豐草	<i>Bidens alba</i> (<i>Bidens pilosa</i>)	w/o R	N/A	-
蔥科小葉菜類	-	R	R	-
蔥	<i>Allium fistulosum</i>	N/A	<i>Phytophthora nicotianae</i>	-
珠蔥	<i>Allium asculonium</i>	N/A	<i>Phytophthora capsici</i> ⁶⁾	莖腐敗病
韭	<i>Allium tuberosum</i> (<i>Allium odorum</i>)	N/A	<i>Phytophthora capsici</i> ⁶⁾	-
蔥科根莖菜類	-	R	R	-
蔥科根莖菜類幼苗	-	N/A	R	-
洋蔥	<i>Allium cepa</i>	N/A	<i>Phytophthora nicotianae</i>	-
蒜	<i>Allium sativum</i>	N/A	<i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora capsici</i> ⁶⁾	-
路薺	<i>Allium chinense</i>	N/A	<i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora capsici</i> ⁶⁾	-
葫蘆科小葉菜類	-	R	R	-
龍鬚菜	<i>Sechium edule</i>	<i>Pseudoperonospora cubensis</i>	w/o R	-
葫蘆科瓜菜類	-	R	R	-

補充表二 (續)、露菌與疫病菌在臺的為害記錄與登記用藥情形¹⁾

Table S2 (continued). Disease records that show downy mildews and *Phytophthora* spp. infections as well as the fungicide registered use cases that target these pathogens¹⁾

Crop group / Crop 作物群/作物	Species name 學名	Downy mildews	Phytophthora spp.
		露菌	疫病菌
		Pathogen species name ²⁾ 病原菌種名 ²⁾	Pathogen species ²⁾ name 病原菌種名 ²⁾ Other Chinese disease name 其他中文病名
葫蘆科瓜果類 幼苗	-	N/A	R
胡瓜/胡瓜幼苗	<i>Cucumis sativus</i>	<i>Pseudoperonospora cubensis</i> ⁶⁾ = <i>Peronoplasmopara cucumeris</i>	<i>Phytophthora capsica</i> ⁶⁾ / <i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora melonis</i> ⁶⁾
葫蘆科瓜果類	-	R	R
葫蘆科瓜果類 幼苗	-	N/A	R
西瓜	<i>Citrullus vulgaris</i>	w/o R	<i>Phytophthora melonis</i> / <i>Phytophthora capsici</i>
香瓜/洋香瓜	<i>Cucumis melo</i>	<i>Pseudoperonospora cubensis</i> = <i>Peronoplasmopara cucumeris</i>	<i>Phytophthora capsici</i> / <i>Phytophthora nicotianae</i> / <i>Phytophthora melonis</i>
茄科果菜類 幼苗	-	N/A	R
茄科果菜類	-	N/A	R
番茄	<i>Solanum lycopersicum</i>	N/A	<i>Phytophthora capsici</i> / <i>Phytophthora nicotianae</i> / <i>Phytophthora infestans</i>
甜椒/辣椒	<i>Capsicum annuum</i>	N/A	<i>Phytophthora capsici</i>
茄子	<i>Solanum melongena</i>	N/A	<i>Phytophthora capsici</i> / <i>Phytophthora nicotianae</i> / <i>Phytophthora infestans</i> ⁶⁾
香瓜茄	<i>Solanum muricatum</i>	N/A	<i>Phytophthora capsica</i> ⁶⁾ / <i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora infestans</i> ⁶⁾
野茄	<i>Solanum coagulans</i>	N/A	<i>Phytophthora capsica</i> ⁶⁾ / <i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora infestans</i> ⁶⁾
茄科根莖菜類	-	N/A	R
茄科根莖菜類 幼苗	-	N/A	R
馬鈴薯	<i>Solanum tuberosum</i>	N/A	<i>Phytophthora capsica</i> ⁶⁾ / <i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora infestans</i>
茄科小葉菜類	-	N/A	R
茄科小葉菜類 幼苗	-	N/A	R
龍葵	<i>Solanum nigrum</i>	N/A	<i>Phytophthora capsica</i> ⁶⁾ / <i>Phytophthora nicotianae</i> ⁶⁾ / <i>Phytophthora infestans</i> ⁶⁾
枸杞	<i>Lycium chinense</i>	N/A	w/o R
旋花科根莖菜類	-	R	N/A
甘藷	<i>Ipomoea batatas</i>	N/A	w/o R
旋花科小葉菜類	-	R	N/A
藜科小葉菜類	-	R	N/A
菠菜	<i>Spinacia oleracea</i>	<i>Peronospora spinaciae</i>	N/A
甜菜/甜菜幼苗	<i>Beta vulgaris</i>	w/o R	w/o R
芹菜	<i>Apium graveolens</i>	N/A	w/o R
胡蘿蔔	<i>Daucus carota</i>	N/A	w/o R
當歸	<i>Angelica graveolens</i>	N/A	w/o R
羅勒/羅勒幼苗	<i>Ocimum basilicum</i>	<i>Peronospora beibahri</i>	w/o R
紫蘇/紫蘇幼苗	<i>Perilla frutescens</i> var. <i>crispa</i>	w/o R	w/o R
薄荷	<i>Mentha canadensis</i>	w/o R	w/o R
仙草	<i>Mesona chinensis</i>	w/o R	w/o R
丹參	<i>Salvia miltiorrhiza</i>	w/o R	<i>Phytophthora cryptogea</i>
莧科小葉菜類	-	R	N/A
莧菜/莧菜幼苗	<i>Amaranthus tricolor</i>	N/A	<i>Phytophthora amaranthi</i>
香椿/香椿幼苗	<i>Cedrela sinensis</i>	N/A	<i>Phytophthora nicotianae</i> / <i>Phytophthora palmivora</i>
金針	<i>Hemerocallis fulva</i>	N/A	<i>Phytophthora nicotianae</i>
百合	<i>Lilium brownii</i> var. <i>viridulum</i>	N/A	<i>Phytophthora chinamomi</i> / <i>Phytophthora drechsleri</i> / <i>Phytophthora palmivora</i> / <i>Phytophthora nicotianae</i>

補充表二 (續)、露菌與疫病菌在臺的為害記錄與登記用藥情形¹⁾

Table S2 (continued). Disease records that show downy mildews and *Phytophthora* spp. infections as well as the fungicide registered use cases that target these pathogens¹⁾

Crop group / Crop 作物群/作物	Species name 學名	Downy mildews 露菌	Phytophthora spp. 疫病菌	
		Pathogen species name ²⁾ 病原菌種名 ²⁾	Pathogen species ²⁾ name 病原菌種名 ²⁾	Other Chinese disease name 其他中文病名
百合	<i>Lilium brownii</i> var. <i>viridulum</i>	N/A	<i>Phytophthora cinnamomi</i> / <i>Phytophthora drechsleri</i> / <i>Phytophthora palmivora</i> / <i>Phytophthora nicotianae</i>	-
錦葵科果菜類	-	N/A	R	-
秋葵	<i>Abelmoschus esculentus</i>	N/A	<i>Phytophthora nicotianae</i>	-
洛神葵	<i>Hibiscus sabdariffa</i>	N/A	<i>Phytophthora nicotianae</i>	-
薑/薑幼苗	<i>Zingiber officinale</i>	N/A	w/o R	-
芋頭/芋幼苗	<i>Colocasia esculenta</i>	N/A	<i>Phytophthora colocasiae</i>	-
葡萄	<i>Vitis vinifera</i>	<i>Plasmopara viticola</i>	N/A	-
柑橘類	<i>Citrus</i> spp.	N/A	<i>Phytophthora citricola</i> / <i>Phytophthora citrophthora</i> / <i>Phytophthora palmivora</i> / <i>Phytophthora parvispora</i>	褐腐病 褐腐病 根腐病 疫病
枇杷	<i>Eriobotrya japonica</i>	N/A	<i>Phytophthora nicotianae</i> / <i>Phytophthora palmivora</i> / <i>Phytophthora cactorum</i>	褐腐病 根腐病
鼠李科梨果類	<i>Ziziphus mauritiana</i>	N/A	<i>Phytophthora drechsleri</i> / <i>Phytophthora palmivora</i>	-
檸檬	<i>Mangifera indica</i>	N/A	<i>Phytophthora palmivora</i>	-
木瓜	<i>Carica papaya</i>	N/A	<i>Phytophthora nicotianae</i> / <i>Phytophthora palmivora</i>	-
番荔枝(釋迦)	<i>Annona squamosa</i>	N/A	<i>Phytophthora citrophthora</i>	-
荔枝	<i>Litchi chinensis</i>	N/A	w/o R	-
龍眼	<i>Dimocarpus longan</i>	N/A	w/o R	-
紅毛丹	<i>Nephelium lappaceum</i>	N/A	w/o R	-
酪梨	<i>Persea americana</i>	N/A	<i>Phytophthora cinnamomi</i> / <i>Phytophthora palmivora</i>	根腐病 果腐病
百香果	<i>Passiflora edulis</i>	N/A	<i>Phytophthora nicotianae</i>	-
番石榴	<i>Psidium guajava</i>	N/A	<i>Phytophthora nicotianae</i>	苗枯病 果腐病
蓮霧	<i>Syzygium samarangense</i>	N/A	<i>Phytophthora palmivora</i>	-
草莓	<i>Fragaria × ananassa</i>	N/A	<i>Phytophthora cactorum</i> / <i>Phytophthora citricola</i> / <i>Phytophthora citrophthora</i> / <i>Phytophthora nicotianae</i>	-
無花果	<i>Ficus carica</i>	N/A	<i>Phytophthora palmivora</i>	白腐病
老葉	<i>Piper betle</i>	N/A	<i>Phytophthora capsici</i> / <i>Phytophthora nicotianae</i>	立枯病
可可	<i>Theobroma cacao</i>	N/A	w/o R	-
胡麻	<i>Sesamum indicum</i>	N/A	w/o R	-
地黃	<i>Rehmannia glutinosa</i>	N/A	<i>Phytophthora nicotianae</i>	-
花木	-	R	R	-
花木 幼苗	-	N/A	R	-
觀賞花卉	-	R	N/A	-
蘭花	Orchidaceae	N/A	<i>Phytophthora citrophthora</i> / <i>Phytophthora nicotianae</i> / <i>Phytophthora palmivora</i>	-
野薑花	<i>Hedychium coronarium</i>	N/A	w/o R	-
康乃馨	<i>Dianthus caryophyllus</i>	N/A	<i>Phytophthora cryptogea</i> / <i>Phytophthora nicotianae</i> / <i>Phytophthora capsici</i>	-
洋桔梗	<i>Eustoma russellianum</i>	w/o R	N/A	-
鳳仙花	<i>Impatiens balsamina</i>	<i>Plasmopara obducens</i> ⁶⁾	N/A	-

¹⁾ Data in this table was summarized from the “List of plant diseases in Taiwan” and the Taiwanese “Plant protection information system website”.

²⁾ If the pathogen species name is listed, it means the crop had disease record in Taiwan, and also has registered use cases.

³⁾ N/A = The crop did not have disease record in Taiwan, and neither have registered use cases.

⁴⁾ w/o R = There is no disease record in Taiwan, but it has registered use case.

⁵⁾ R = The crop group has registered use case.

⁶⁾ Pathogens with this symbol have disease records in the same host genus.