

Table 1. Tentative list of threatening plant pathogens not reported in the U.S.^{a,b}

Type ^c	Disease	Pathogen	Major host(s)	Distribution (may not be complete)	Threat ^d
FF	Brown stripe downy mildew	<i>Sclerophthora rayssiae</i> var. <i>zeae</i>	Corn, sorghum	India, Nepal, Pakistan, Thailand	*
FF	Rice bacterial leaf streak	<i>Xanthomonas oryzae</i> pv. <i>oryzicola</i>	Rice	S.E. Asia, India, China, N. Australia, W. Africa	*
FF	Sugarcane bacterial blight	<i>Xanthomonas vasculorum</i>	Sugarcane	S. Africa	
FF	Philippine downy mildew	<i>Peronosclerospora philippinensis</i>	Corn	Philippines	*
OT	Red ring disease	<i>Bursaphelenchus cocophilus</i>	Palms	C. America, Caribbean	
--	Violet root rot	<i>Helicobasidium mompa</i> (<i>H. brebissonii</i>)	(various)	Asia	
Ve	Tomato black ring	Virus (TBRV)	Tomato	Czech Republic, Central Europe	
Ve	White cyst nematode	<i>Globodera pallida</i>	Potato	various, Canada	
Ve	Potato wart	<i>Synchytrium endobioticum</i>	Potato	Canada, other countries	*
Ve	Potato smut	<i>Thecaphora solani</i>	Potato	South America	
Ve	Andean latent tymovirus disease	Potato Andean latent tymovirus	Potato	South America	
Ve	Andean mottle comovirus	Potato Andean mottle comovirus	Potato	South America	
Ve	Sweetpotato chlorotic stunt	Virus (SPCSV)	sweet-potato	several countries	
Ve	Sweetpotato scab	<i>Elsinoe batatas</i>	sweet-potato	South Pacific, southern Asia	
Ve	Witches broom	<i>Phytoplasma</i>	sweet-potato	South Pacific	
Fr	Huanglongbing (Citrus greening)	<i>Liberobacter africanus</i> <i>Liberobacter asiaticus</i>	Citrus	S.E. Asia, S. Africa	*
Fr	Sweet orange scab	<i>Elsinoe australis</i>	Citrus	southern S. America	*
Fr	Citrus chlorotic dwarf	Virus (CCDV)	Citrus	Turkey	
Fr	Citrus variegated chlorosis	<i>Xylella fastidiosa</i>	Citrus	southern S. America	*
Fr	Mal seco	<i>Phoma tracheiphila</i>	Citrus	Mediterranean	
Fr	Black spot	<i>Guignardia citricarpa</i>	Citrus	Asia, S. Africa, southern S. America	*
Fr	Phaeoramularia fruit and leaf spot	<i>Phaeoramularia angolensis</i>	Citrus	East Africa	

Fr	Bacterial blight	<i>Xylophilus ampelinus</i>	Grape	Africa, Europe	
Fr	Flavescence doree (maladie du Baco 21)	<i>Phytoplasma</i>	Grape	Europe	
Fr	Apple proliferation	<i>Phytoplasma</i>	Apple	Southern Europe, India?, S. America?	*
Fr	Phytoplasma yellows	<i>Candidatus Phytoplasma australiense</i>	Strawberry	Australia, New Zealand	
Fr	Fusarium wilt	<i>Fusarium oxysporum f.sp. fragariae</i>	Strawberry	Australia, Japan, Korea (plus questionable reports)	
Fr	Marginal chlorosis	<i>Candidatus Phlomobacter fragariae</i>	Strawberry	France	
Fr	Blood disease	<i>Pseudomonas celebensis</i> (new name to be proposed)	Banana	Asia	
Fr	Freckle	<i>Guignardia musae</i> (Phyllosticta musarum)	Banana	Asia	
Fo	Larch canker	<i>Lachnellula willkommii</i>	Larch	Europe	+
Fo	Brown rust of larch	<i>Triphragmiopsis laricinum</i>	Larch	China	+
Fo	“oak disease”	<i>Phytophthora quercina</i> sp nov.	Oak	Europe	+
Fo	Needle blight	<i>Cercospora pini-densiflorae</i>	Pine	Japan	+
Fo	Resin top disease	<i>Cronartium flaccidum</i>	2-needled Pines	Europe	+
Fo	Pine twist rust	<i>Melampsora pinitorqua</i>	2-needled Pines	Europe	+
Fo	(blue stain of beech)	<i>Ceratocystis nothofagi</i>	Nothofagus	S. America	+
Fo	(armillaria root disease)	<i>Armillaria novae-zelandiae</i>	Hardwoods and pine	Australia, New Zealand, PNG	+
Fo	(blue stain of beech)	<i>Ophiostoma valdivianum</i>	Nothofagus	S. America	+
Fo	Phytophthora disease of alders	<i>Phytophthora alni</i>	Alder	Europe	+
Fo	(root disease and wilt)	<i>Leptographium truncatum</i>	All pines	New Zealand, S. America, Canada	+
Fo	Watermark disease	<i>Erwinia salicis</i>	willow	Europe, Japan	+

^a A disease can be a threat because of its impact on yield (quantity or quality) and international trade, toxin production, very high cost of control, difficulty in controlling with available technology, and ability of the pathogen to survive and the disease to spread rapidly. The forest/tree pathogens were provided as a consensus from a sub-committee of the Forest Pathology Committee. Other pathogens came from many sources.

^b The list reflects the deliberations of an ad hoc committee. The list is not an official document of APS and is not endorsed by APS Council.

^c FF: field and forage; Ve: vegetable; Fr: fruit; OT: ornamentals and turf; Fo: forest

^d Most serious threats to U.S. crops are identified by an asterisk (*), based on a vote by the ad hoc committee. Most serious tree pathogens are identified with a plus (+), based on a selection by a sub-committee of the Forest Pathology committee. However, all pathogens listed are considered to be threats.

Table 2. Tentative list of threatening plant pathogens of very limited distribution in the U.S.^{a,b}

Type ^c	Disease	Pathogen	Major host(s)	Distribution (may not be complete)	Threat ^d
FF	Karnal bunt	<i>Tilletia indica</i>	Wheat	Pakistan, India, Nepal, Mexico; U.S (several states)	
FF	Rice bacterial leaf blight	<i>Xanthomonas oryzae</i> pv. <i>oryzae</i>	Rice	S.E. Asia, India, China, S. America, N. Australia, W. Africa; Louisiana	*
FF	Soybean rust	<i>Phakopsora pachyrhizi</i>	Soybean	India, Australia; Hawaii, Puerto Rico	*
FF	Soybean dwarf	Soybean dwarf virus (SDV)	Soybean	China, Japan, other countries; US	
FF	Corn cyst nematode	<i>Heterodera zaeae</i>	Corn	Various countries; restricted US	
OT	Lethal yellowing	<i>Phytoplasma</i>	Palms	C. America, Caribbean; Florida	
OT	Anthurium blight	<i>Xanthomonas campestris</i> pv. <i>dieffenbachiae</i>	Anthurium	India, Netherlands; HA, FL	
OT	Bacterial wilt	<i>Ralstonia solanacearum</i>	Geranium	Costa Rica, Guatemala; Wisconsin	
OT	Mosaic nepovirus	Arabis mosaic nepovirus	Arabis	Africa, Asia, Europe, and US [where?]	
Ve	Potato golden cyst nematode	<i>Globodera rostochiensis</i>	Potato	Europe, India, N.Africa, Asia, S. America; New York	*
Ve	Veinal necrosis	Virus (PVYN)	Potato, Tobacco	Canada, Europe, S. America	
Ve	Tomato yellow leaf curl	Virus (TYLCV)	Tomato	Dominican Republic, E. Mediterranean, Jamaica; Florida	*
Ve	Potato virus Y–NTN strain	Virus (PVY)	Potato	various, CA, NE	
Ve	Bean golden mosaic	Virus	Beans	Caribbean, C. America; Florida, Puerto Rico	
Fr	Citrus canker	<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	Citrus	Asia, S. America; Florida	*
Fr	Sharka (Plum Pox)	Virus (PPV)	Prunus spp.	Mediterranean Europe, Chile, Canada ; Pennsylvania	*
Fr	Bunchy top	Virus (BBTV)	Banana	many tropical and sub-tropical countries; Hawaii	
Fo	Pink disease	<i>Erythricium salmonicolor</i>	fruit trees, woody perennials	Humid tropics, FL, LA, MS	+
Fo	Sudden Oak Death	<i>Phytophthora ramorum</i>	Oaks, Ericaceae	Germany, CA, OR	+
Fo	Scleroderris canker (European)	<i>Gremmeniella abietina</i> (European strain)	pine, other conifers	Europe, Canada	+

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^d*Most* serious threats to U.S. crops are identified by an asterisk (*), based on a vote by the ad hoc committee. Most serious tree pathogens are identified with a plus (+), based on a selection by a sub-committee of the Forest Pathology committee. However, all pathogens listed are considered to be threats.

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