

Known Host Crops for *Phakopsora pachyrhizi* Causal Agent of Soybean Rust (SBR)

August 10, 2006

NOTE: In the United States, the only crop that has a reported yield effect from *P. pachyrhizi* is soybeans. Other crops in the U.S. on which infection has been reported but of limited scope with no apparent economic impact are scarlet runner bean, lima bean, and kidney bean. Kudzu and beggarweed have also been identified in the U.S. as non-crop host plants. The host crops in the following table have been identified internationally as being capable of supporting sporulating lesions following infection by *P. pachyrhizi*. The fourth column of this table indicates the nature of the reports for each crop with references cited. Inclusion of a crop in this list is not an indication of a need to spray fungicides. Many of the crops listed have only been infected in the greenhouse and are not known to be susceptible to SBR in the field. Other crops have been infected in the field but are not known to suffer yield effects from SBR. This table attempts to collate the information that is available on this subject and as new information becomes available we will issue updates. Refer to your state or county extension service for disease management recommendations.

CROP NAME		FOOD OR FEED GROUP*	NATURE OF REPORT**	MAJOR-PRODUCING STATES FOR EACH CROP***
COMMON	SCIENTIFIC			
Bean, Common, Succulent (garden, green, snap, and wax)	<i>Phaseolus vulgaris</i> var <i>vulgaris</i>	Edible-podded legumes (6A)	Field (yield limiting) (1) Field (8) Greenhouse (2,4,11,10,13,14)	CA, FL, GA, IL, IN, MD, MI, NJ, NY, NC, OR, PA, SC, TN, VA, WI
Bean, Common, Dry (field, kidney, navy, pinto)	<i>Phaseolus vulgaris</i> var <i>vulgaris</i>	Dried shelled bean (6C)	Field (8,15,18) Greenhouse (2,4,10,14)	CA, CO, ID, KS, MI, MN, NE, ND, NM, NY, TX, WA, WY
Bean, Fava or Broadbean	<i>Vicia faba</i>	Succulent shelled bean (6B) Dried shelled bean (6C)	Greenhouse (6)	CA, FL, WA
Bean, Lablab or Hyacinth	<i>Lablab purpureus</i>	Dried shelled bean (6C)	Field (8,13) Greenhouse	FL, Puerto Rico

CROP NAME		FOOD OR FEED GROUP*	NATURE OF REPORT**	MAJOR-PRODUCING STATES FOR EACH CROP***
COMMON	SCIENTIFIC			
			(2,6,9,12,13)	
Bean, Lima	<i>Phaseolus lunatus</i> var <i>lunatus</i>	Succulent shelled bean (6B) Dried shelled bean (6C)	Field (5,18) Greenhouse (2,3,12,13,14)	AL, CA, DE, GA, IL, MD, MN, NJ, NC, OR, SC, TN, WA, WI, VA
Bean, Mung	<i>Vigna radiata</i>	Dried shelled bean (6-C)	Field (yield limiting, but rarely) (13) Field (7,8) Greenhouse (2,6)	OK, TX and as hay in Southwestern U.S.
Bean, Scarlet Runner	<i>Phaseolus coccineus</i>	Edible-podded legumes (6A) Succulent shelled bean (6B)	Field (18)	Southwest U.S.
Bean, Winged or Goa	<i>Psophocarpus tetragonolobus</i>	Proposed as legume vegetable (6)	Greenhouse (6)	FL
Bean, Yam	<i>Pachyrhizus ahipa</i> , <i>P. erosus</i>	Tuberous and corm vegetables (1C and 1D)	Field (2,5,7,8,13) Greenhouse (4,6,14)	FL, HI, and Puerto Rico
Blackeyed Pea, Cowpea or Yardlong Bean	<i>Vigna unguiculata</i>	Succulent shelled bean (6B) Dried shelled bean (6C) Foliage of cowpea (7)	Field (5) Greenhouse (2,6,12,13,14)	AL, AR, FL, GA, MO, MS, OK, SC, TN, TX
Calopo	<i>Calopogonium mucunoides</i>	Nongrass animal feed (18)	Greenhouse (6,12)	Pasture and rangeland in U.S.
Clover; Alyce or Oneleaf	<i>Alysicarpus vaginalis</i>	Nongrass animal feed (18)	Greenhouse (9)	Gulf of Mexico
Clover; Crimson and White	<i>Trifolium repens</i> , <i>T. incarnatum</i>	Nongrass animal feed (18)	Greenhouse (2,9)	OR, TN, TX, and other states in Southern U.S.
Crotalaria	<i>Crotalaria anagyroides</i> , <i>C. spectabilis</i>	Proposed as member of Nongrass animal feed (18)	Field (5) Greenhouse (4,9)	AL, CA, FL, MS
Crownvetch	<i>Securigera</i>	Nongrass animal feed (18)	Greenhouse (9)	Central and Northern states

CROP NAME		FOOD OR FEED GROUP*	NATURE OF REPORT**	MAJOR-PRODUCING STATES FOR EACH CROP***
COMMON	SCIENTIFIC			
	<i>varia</i>			
Fenugreek	<i>Trigonella foenum-graicum</i>	Herbs and spices (19)	Greenhouse (2,13)	CA, NY, PA
Kudzu	<i>Pueraria amontana</i> <i>var lobata</i>	Nongrass animal feed (18)	Field (2,5,16,17) Greenhouse (4,6,9)	Introduced as forage crop, now present in many soybean producing states as a weed
Lespedeza	<i>Lespedeza cuneata</i> , <i>Kummerowia striata</i> , <i>K. stipulaceae</i>	Nongrass animal feed (18)	Greenhouse (4,9,10)	CA
Lupine; Blue, White, and Yellow	<i>Lupinus albus</i> , <i>L. angustifolius</i> , <i>L. luteus</i>	Dried shelled bean (6C) Nongrass animal feed (18)	Greenhouse (4,9,13)	CA, MI, WA, and Southeast U.S.
Pea, garden	<i>Pisum sativum</i>	Succulent shelled bean (6B) Foliage of field pea (7)	Greenhouse (2,9,10)	CA, DE, ID, MN, NJ, NY, OR, TX, WA, WI
Peatree or Colorado River Hemp (Sesbania)	<i>Sesbania exaltata</i>	Nongrass animal feed (18)	Greenhouse (2,9)	AZ, CA, MS, and coastal region of Southern U.S.
Pigeon Pea	<i>Cajanus cajan</i>	Edible-podded legumes (6A) Succulent shelled bean (6B) Dried shelled bean (6C)	Field (8,16) Greenhouse (2,4,6,9,13,14)	Puerto Rico and Southern U.S.
Siratro	<i>Macroptilium atropurpureum</i>	Proposed as member of Nongrass animal feed (18)	Field (7) Greenhouse (2,4,6,13)	TX
Soybean	<i>Glycine max</i>	Soybean, dry seed is in	Field (yield limiting)	AL, AR, DE, FL, GA, IL, IN,

CROP NAME		FOOD OR FEED GROUP*	NATURE OF REPORT**	MAJOR-PRODUCING STATES FOR EACH CROP***
COMMON	SCIENTIFIC			
(including edamame)		Legume vegetable crop group (6); Soybean, vegetable or edamame is in Edible-podded legumes (6A), Succulent shelled bean (6B) and Foliage legume vegetable (7)	(2,5,8,12,13)	IA, KS, KY, LA, MD, MI, MN, MS, MO, NE, NJ, NY, NC, ND, OH, OK, PA, SC, SD, TN, TX, VA, WV, WI
Swordbean	<i>Canavalia gladiata</i>	Edible-podded legumes (6A)	Field (8)	FL and Southwest U.S.
Trefoil	<i>Lotus</i> spp.	Nongrass animal feed (18)	Greenhouse (4,13)	MI, MN, OR, WI, and areas north of Potomac and Ohio Rivers and west to edge of Great Plains
Urd or Black Gram	<i>Vigna mungo</i>	Dried shelled bean (6C)	Field (8) Greenhouse (6)	Southern U.S.
Wild Soybean	<i>Neonotonia wightii</i>	Unclassified forage crop	Field (13)	unknown
Woolypod Vetch	<i>Vicia villosa</i> subsp. <i>varia</i>	Nongrass animal feed (18)	Greenhouse (13)	U.S. Cotton Belt States
Yellow Sweet Clover	<i>Melilotus officinalis</i>	Nongrass animal feed (18)	Greenhouse (9,13)	Great Plains

* Based on groups listed in the U.S. Environmental Protection Agency Code of Federal Regulations (40 CFR 180.41) with an update by Bernie Schneider of EPA.

** Observed susceptible by greenhouse challenge or natural field infection (indicated if reported as yield limiting). References are indicated by numbers in parentheses.

*** Major-producing states had a significant portion of national production as reported by USDA Ag Statistics for 2002 or in 1998 edition of Food and Feed Crops of the United States by G.M. Markle, .J. Baron, and B.A. Schneider of the IR-4 Program and EPA.

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This is a working document of the Working Group on Soybean Rust. It is a tool for Working Group members who work with SBR. Corrections, additions, or comments on this list should be sent to:

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