

Soybean rust

Sources of Offshore Inoculum



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Costa Rica, December 2003



- 1- Guanacaste: Liberia, Pelón de la Bajura
- 2- Guanacaste: Higuerón
- 3- Alajuela: Upala

Costa Rica, December 2003

*Acacia, Cajanus, Diphysa,
Phaseolus, Vigna, and others.*

No soybean rust found

Honduras, December 2003



1,2 - Valle de Yeguaré, Zamorano Experimental Field

Honduras, December 2003

Phakopsora meibomiaae on *Phaseolus* sp.

- *Chaconia ingae* on *Inga thibaudiana*
- *Uredo cajani* on *Cajanus cajan*
- Others

***Glycine max* – no rust found**

Mexico, December 2003



- 1- Veracruz, Tanchiquín.
- 2- Veracruz, Tetlaxco, Coscomatepec.

Mexico, December 2003

Glycine max – no rust found

Pachyrhizus erosus No rust

Veracruz: Emiliano Zapata, Plan-Chico

Veracruz: Vega de la torre.

Also found:

Ravenelia acaciae-pennatulae on *Acacia* sp.

Ravenelia mainsiana on *Acacia* sp.

Uromyces appendiculatus on *Phaseolus* sp.

Others

Puerto Rico May 2004



1- Monsanto

2- Puerto Rico Dept. Agronomy and Soils

3- ICIA (Illinois Crop Improvement Association)

4- Mycogen

5- Pioneer

Puerto Rico, May 2004

No rust found on *Glycine max*

Phakopsora meibomia was found on

- *Vigna* spp.: four collections in El Yunque National Park and on one collection in Palmer.
- *Phaseolus* on one collection in Isabela
- *Rhynchosia* sp. on one collection in Isabela
- *Clitoria* sp. on one collection in Adjuntas.

Puerto Rico, May 2004

- Also found:
- *Uromyces vigae* on *Vigna vexillata*, *V. luteola*, and *Phaseolus* sp.
- *Lipocystis caesalpineae* on *Mimosa ceratonia*
- *Uromyces dolicholi* on *Rhynchsia minima*
- *Uromyces appendiculatus* on *Phaseolus*
- *Uredo cajani* on *Cajanus cajan*
- *Ravenelia cassiaecola* var. *cassiaecola* on *Chamaecrista* sp.
- *Ypsilospora tucumanensis* on *Inga* sp

Panama – November 2004



No *Phakopsora pachyrhizi* found

Panama

- *Phakopsora meibomiaie* was found on:
Phaseolus multiflorus var. *coccineus*
(heavily infected)
Desmodium sp.
- *Phakopsora* sp. was found on *Erythrina* sp.
(The molecular test inconclusive).
- *Phaseolus vulgaris* - no rust was found.

Panama

Also found:

Uredo cajani on *Cajanus cajan*

Dicheirinia panamensis (new species) on *Cojoba rufescens*

Uromyces appendiculatus on *Vigna unguiculata*

Uromyces dolicholi on *Rhynchosia*

Uromyces hedysari-paniculati on *Desmodium*

Uromyces neurocarpi on *Clitoria rubiginosa*

Uropyxis diphisae on *Dyphysa americana*

Puerto Rico December 2004

Glycine max – no rust found



- 1- Fac. Agr. Puerto Rico, Exp. Station.
- 2- Syngenta
- 3- Pioneer
- 4- Puerto Rico Dept. Agronomy and Soils
- 5- Tropical Agricultural Research Service

Puerto Rico, December 2004

- *Phakopsora meibomia* was found on heavily infected *Lablab purpureus* and on *Tetramnus uncinatus*
- Also found:
- *Lipocystis ceasalpineae* on *Mimosa ceratonia*
- *Sphaerophragmium acaciae* on *Albizia lebeck*
- *Uredo cajani* on *Cajanus cajan*
- *Uromyces dolicholi* on *Rhynchosia minima*
- *Uromyces vignae* on *Vigna vexillata* and *Vigna* sp.
- *Ypsilospora tucumanensis* on *Inga vera*



**Soybean rust workshop
Puerto Rico Dec 2004**

Mexico, May 2005



Mexico, May 2005



1- San Luís Potosí: Ebano

2- San Luís Potosí: Tamuín

3- Tamaulipas: González

Mexico, May 2005



4- Chiapas: Villaflores

5- Chiapas: Tapachula

Mexico, May 2005

Rusts were found on other legumes:

- ***Uromyces striatus* var. *striatus*** on *Medicago sativa*.
- ***Uromyces trifolii-repentis* var. *trifolii-repentis*** on *Trifolium repens*.
- ***Uromyces* sp.** on *Macroptilium atropurpureum*.
- ***Ravenelia havanensis*** on *Enterolobium cyclocarpum*.

Not on *Phaseolus vulgaris*

Other legumes, no rust

- *Pachyrhizus erosus*
- *Crotalaria* sp.
- *Arachis hypogaea*

http://nt.ars-grin.gov/taxadescriptions/keys

Rust fungi on Fabaceae (legumes) - Microsoft Internet Explorer

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Address <http://nt.ars-grin.gov/taxadescriptions/keys/LegumeRustsIndex.cfm> Go

Selected rust fungi on Fabaceae (legumes)

United States
Department of Agriculture
Agricultural Research Service

(Fungi, Basidiomycetes, Uredinales)

Systematic Botany and Mycology Laboratory, ARS, USDA



With the discovery of Asian soybean rust (*Phakopsora pachyrhizi*) in the United States, interest in rust fungi on plants in the Fabaceae (legumes) has increased, especially about species that might be confused with soybean rust. Soybean is only known to be infected by *P. pachyrhizi* and *P. meibomia*, but many other possible hosts of those species frequently are infected by other rusts. In order to aid in the accurate identification of rusts on these leguminous hosts, a list was developed of rust species on common leguminous plants most likely to be encountered when surveying for soybean rust in the United States. Included here are rust fungi that occur both inside and near the U. S. borders.

[Start Here](#)

This site is a product of the research of the Systematic Botany and Mycology Laboratory, ARS, USDA.

Suggested citation: Hernandez, J.R., Cline, E., Palm, M.E., Farr, D.F. & McCray, E.B. (n.d.) Rust Fungi on Fabaceae (legumes) in or near the United States. Systematic Botany & Mycology Laboratory, ARS, USDA. Retrieved November 10, 2005, from <http://nt.ars-grin.gov/taxadescriptions/keys/LegumeRustsIndex.cfm>

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Summary

- *Phakopsora pachyrhizi* was not found in Costa Rica, Honduras, Panama or Puerto Rico
- *Phakopsora meibomiaae* was found on numerous non-cultivated hosts

Acknowledgements

- APS
- Doug Luster and Amy Rossman, USDA/ARS
- Laurene Levy, USDA/APHIS
- Mary Palm, USDA/APHIS
- USDA/APHIS International Services
- My hosts in the various countries