Florida Department of Agriculture and Consumer Services
CHARLES H. BRONSON, Commissioner
The Capitol • Tallahassee, FL 32399-0800

Please Respond to:

May 12, 2005

Mr. Dan Rosenblatt, Chief
Minor Use, Inerts, and Emergency Response Branch (7505C)
U.S. EPA, Office of Pesticide Programs
Crystal Mall 2 - 2nd Floor
1801 Bell Street
Arlington, Virginia 22202

Dear Mr. Rosenblatt:

In accordance with 40 Code of Federal Regulations (CFR), Part 166.20, I am requesting on the behalf of Florida growers a quarantine emergency exemption for the use of certain fungicides to control Australasian Soybean Rust (*Phakospora pachyrizi*) on Crop Group 6 (legume vegetables excluding soybeans) and Crop Group 7 (foliage of legume vegetables) as described in 40 CFR, Part 180.41. This is our first exemption request seeking the Agency's approval for this use.

As you are aware, the states of Minnesota and South Dakota submitted a similar exemption request to the Agency two years ago for the use of these fungicides on soybeans. Other states were allowed to cite that petition and submit abbreviated state data to obtain exemptions for use of these fungicides on soybeans; however, that petition only included soybeans and did not consider other similar crops that also may be susceptible to this disease. I would like to build on the success of the soybean response by adopting the same process for the fungicides and crops listed in this petition.

This request is the result of a nationwide effort to obtain exemptions for five fungicide active ingredients that may be used by nearly all states to prevent the spread of Soybean Rust to millions of acres of susceptible crops. Working jointly with the University of Tennessee, this Department has obtained estimated acreage and financial information for the subject crops from 45 states. States that participated in our survey should be allowed to cite this petition for their own purposes. The following fungicides and their brand names have been determined to be the best candidates for this quarantine exemption.

Tebuconazole (Folicur, Orius)
Myclobutanil (Nova, Rally)
Propiconazole (Tilt, Propimax, Bumper)
Trifloxystrobin (Stratego)
Azoxystrobin (Quilt)

Our Bureau of Pesticides has conducted a scientific review of each of the fungicides proposed for use in Florida under this exemption. Department experts in environmental fate, toxicology, human health, ecotoxicology, and endangered species protection have assessed the possible effects of these fungicides upon Florida's environment and have concluded that there is no unreasonable risk when these materials are used as indicated. I am including a copy of our Endangered Species review which we will share with the Florida Regional Office of the U.S. Fish and Wildlife Service in Jacksonville.

Please note that all of the registrants representing the listed fungicides have been notified of our intention to request this quarantine exemption and support this request.

Please refer to the enclosed materials in support of this quarantine exemption request. Three copies of these materials are enclosed. Three identical disks which contain a portion of the appendices are also included. If you have any questions in connection with this request or if there is any further information you will need for your review, please contact Mr. Charlie L. Clark or Mr. Robert H. Moore of my staff, (850) 487-2130.

We greatly appreciate your consideration of our exemption request.

Sincerely,

Charles H Bronson

CHARLES H. BRONSON
COMMISSIONER OF AGRICULTURE

Enclosures

CHB/rm

cc: Ms. Terry Rhodes
Dr. Joanne Brown
Dr. Jimmy Cheek
Mr. Carl Loop, Jr.
Mr. Richard Corbett
Dr. Fred Fishel
Dr. Allen Straw
Mr. Jace Burch
Dr. Charles W. Meister
Mr. Richard Gaskalla
Mr. Steven J. Rutz
Mr. Dale Dubberly
Dr. Dennis Howard
Ms. Joanne Cook
Ms. Patty Lucas

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Section 18 Quarantine Exemption Request For The Use Of Tebuconazole (Folicur, Orius), Myclobutanil (Rally 40W, Nova 40W), Propiconazole (Tilt, Bumper, PropiMax), Propiconazole + Trifloxystrobin (Stratego), Azoxystrobin + Propiconazole (Quilt) Fungicides On Crop Group 6 (excluding soybeans) and Crop Group 7 For Control Of Australasian Soybean Rust (*Phakopsora pachyrhizi*)

Submitted by the
Florida Department of Agriculture and Consumer Services
And the University of Tennessee

Contact Persons and Qualified Expert (166.20(a)(1))

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DESCRIPTION OF PESTICIDES REQUESTED (166.20 (a) (2))

Pesticides requested: Several products have emerged as potentially efficacious against Australasian Soybean Rust. No registrant has indicated the ability to meet the needs of the agricultural industry should an Australasian Soybean Rust epidemic occur in the US in 2005. As such, we request that several products be considered for approval.

No efficacy data is currently available for any product controlling soybean rust on Crop Groups 6 (excluding soybeans) and 7. The following products are listed as candidates. Some data are available which shows these fungicides are effective when used on soybeans (Crop Group 6). We believe that the data on soybeans is sufficient to assume efficacy on other crops in Crop Groups 6 and 7.

While each state may make its own product decisions, depending on local conditions, it is suggested that several rather than one or two fungicides should be requested. The repeated use of fungicides that have the same mode of action will eventually lead to a strain of disease that is resistant to control by the fungicide. Also, the availability of several fungicides generally provides growers options with respect to fungicide costs.

Due to the large acreage potentially impacted, registrants have informed the states that no single product will be available in sufficient quantity to treat the potential land area impacted by soybean rust.

Active ingredients are listed in order of preference for use.

Common Chemical Name (Active Ingredient): tebuconazole
Trade Names(s) And EPA Reg. No.: Folicur®, EPA Reg. Number 264-752
Formulation: 3.6F
% Active Ingredient: 38.7% (3.6 lb/gal)
Manufacturer: Bayer CropScience LP; Research Triangle Park, NC 27709

Common Chemical Name (Active Ingredient): tebuconazole
Trade Names(s) And EPA Reg. No.: Orius 3.6F, EPA Reg. Number 264-752-66222
Formulation: 3.6F
% Active Ingredient: 38.7% (3.6 lb/gal)
Manufacturer: Makhteshim Agan of North America, Inc.; New York, NY 10176

Common Chemical Name (Active Ingredient): myclobutanil
Trade Names(s) And EPA Reg. No.: Rally™ 40W, EPA Reg. Number 62719-411
Formulation: W
% Active Ingredient: 40%
Manufacturer: Dow AgroSciences LLC; Indianapolis, IN 46268-1054

Common Chemical Name (Active Ingredient): myclobutanil
Trade Names(s) And EPA Reg. No.: Nova™ 40W, EPA Reg. Number 62719-411
Formulation: W
% Active Ingredient: 40%
Manufacturer: Dow AgroSciences LLC; Indianapolis, IN 46268-1054

Common Chemical Name (Active Ingredient): propiconazole
Trade Names(s) And EPA Reg. No.: Tilt®, EPA Reg. Number 100-617
Formulation: 41.8EC
% Active Ingredient: 41.8% (3.6 lb/gal)
Manufacturer: Syngenta Crop Protection, Inc.; Greensboro, NC 27409

Common Chemical Name (Active Ingredient): propiconazole
Trade Names(s) And EPA Reg. No.: Bumper®, EPA Reg. Number 66222-42
Formulation: 41.8EC
% Active Ingredient: 41.8% (3.6 lb/gal)
Manufacturer: Makhteshim-Agan; New York, NY 10176

Common Chemical Name (Active Ingredient): propiconazole
Trade Names(s) And EPA Reg. No.: PropiMax™ EC, EPA Reg. Number 62719-346
Formulation: 41.8 EC
% Active Ingredient: 41.8% (3.6 lb/gal)
Manufacturer: Dow Agrosciences, LLC; Indianapolis, IN 46268

Common Chemical Name (Active Ingredient): propiconazole + trifloxystrobin
Trade Names(s) And EPA Reg. No.: Stratego®, EPA Reg. Number 264-779
Formulation: 2.08F
% Active Ingredient: 11.4% propiconazole (1.04 lb/gal), 11.4% trifloxystrobin (1.04 lb/gal)
Manufacturer: Bayer Corporation; Kansas City, MO 64120-0013

Common Chemical Name (Active Ingredient): azoxystrobin + propiconazole
Trade Names(s) And EPA Reg. No.: Quilt®, EPA Reg. Number 100-1178
Formulation: 1.66 EC
% Active Ingredient: 11.7% propiconazole (1.04 lb/gal), 7.0% azoxystrobin (0.62 lb/gal)
Manufacturer: Syngenta Crop Protection, Inc.; Greensboro, NC 27409

DESCRIPTION OF PROPOSED USE (166.20 (a)(3))

Sites to be Treated: All crops in Crop Group 6 (excluding soybeans) and Crop Group 7 as currently identified in 40 CFR Part 180.

Method of Application: Ground or Aerial. Chemigation is allowed if the Section 3 label permits chemigation and includes required instructions. The registrant has the option of prohibiting chemigation on the Section 18 label.

Rate of Application (tebuconazole): up to 1.8 oz a.i./A, up to 4 fluid ounces product per acre
Rate of Application (myclobutanil): up to 2.0 oz a.i./A, up to 5 fluid ounces product per acre
Rate of Application (propiconazole): up to 3.6 oz a.i./A, up to 8 fluid ounces product per acre
Rate of Application (propiconazole + trifloxystrobin): up to 2.6 oz a.i./A, up to 10 fluid ounces product per acre
Rate of Application (propiconazole + azoxystrobin): up to 2.9 oz a.i./A, up to 14 fluid ounces product per acre

Maximum Number of Applications: Maximum of three collective applications of approved Section 18 fungicides. No more than two applications may be made with any one given active ingredient.

Total Acreage to be Treated: 60,002 acres of Crop Groups 6 (excluding soybeans) and 7 in Florida.

26,500 acres of Crop Groups 6 (excluding soybeans) and 7 in Tennessee.

6,026,018 acres of Crop Groups 6 (excluding soybeans) and 7 in the United States (45 states responded to our survey). See **Appendix A** for a list of states and their reported acreage.

These acreage figures represent 100% of Crop Groups 6 (excluding soybeans) and 7 crops. It is very unlikely that 100% of the national or individual state acreage would have to be treated.

Total Amount of Pesticide to be Used: Assuming 60,002 acres of the subject crops in Florida and 26,500 acres in Tennessee, the following scenario applies: assumes that only one of these products used over the treated acreage at the maximum allowed rate and number of applications – actual use may reflect a combination of products applied at less than maximum rates.

Florida

3,750.13 gal. of product or 13,500.45 lbs a.i. of tebuconazole, or;
37,501.25 lbs. of product or 15,000.5 lbs a.i. of myclobutanil, or;
5,625.2 gal of product or 20,250.6 lbs a.i. of propiconazole, or;
9,375.3 gal. of product or 19,501 lbs. a.i. of propiconazole + trifloxystrobin, or;
13,125.4 gal. of product or 21,750.7 lbs. a.i. of propiconazole + azoxystrobin

Tennessee

1,656.25 gal. of product or 5,962.5 lbs a.i. of tebuconazole, or;
16,562.5 lbs. of product or 6,625 lbs. a.i. of myclobutanil, or;
2,484.38 gal of product or 8,943.75 lbs. a.i. of propiconazole, or;
4,140.6 gal. of product or 8,612.5 lbs. a.i. of propiconazole + trifloxystrobin, or;
5,797 gal. of product or 9,606 lbs. a.i. of propiconazole + azoxystrobin

Tebuconazole (Folicur, Orius) is a systemic, triazole fungicide that can be used as curative systemic eradicant and a protectant. It has post-infection activity that can stop pathogen establishment in the early phases of disease development. Tebuconazole has also shown anti-sporulant activity, reducing inoculum production, thereby slowing disease progress. Tebuconazole is a broad-spectrum product and has shown excellent activity against other rust diseases, such as wheat leaf rust and sunflower rust. **This exemption request is for the use of up to two applications of tebuconazole for control of soybean rust. Use of tebuconazole on the subject crops would result in 225,000 lbs a.i. used per 1 million acres treated.**

Myclobutanil (Rally, Nova) is a similar systemic, triazole fungicide that can be used as systemic eradicant and a protectant. It has post-infection activity that can stop pathogen establishment in the early phases of disease development. Myclobutanil is an anti-sporulant, reducing inoculum production, thereby slowing disease progress. **This exemption request is for the use of up to two applications of myclobutanil for control of soybean rust. Use of myclobutanil on the subject crops would result in 250,000 lbs a.i. used per 1 million acres treated.**

Propiconazole (Tilt, PropiMax, and Bumper) is a systemic, triazole fungicide with curative and protectant activity. It has post-infection activity that can stop pathogen establishment in the early phases of disease

development. Propiconazole can also exhibit anti-sporulant activity, reducing inoculum production and slowing disease progress. **This exemption request is for the use of up to two applications of propiconazole (Tilt, PropiMax, or Bumper) for control of soybean rust. Use of propiconazole on the subject crops would result in 337,500 lbs a.i. used per 1 million acres treated.**

Propiconazole + trifloxystrobin premix (Stratego) is a premixed combination of two systemic products, a triazole fungicide (propiconazole) that can be used as systemic eradicant and a protectant, and a strobilurin (trifloxystrobin). While propiconazole has post-infection activity that can stop pathogen establishment in the early phases of disease development and anti-sporulant activity, reducing inoculum production, this product premix should not be used as a curative. **This exemption request is for the use of up to two applications of propiconazole + trifloxystrobin (Stratego) for control of soybean rust. Use of propiconazole + trifloxystrobin on the subject crops would result in 325,000 lbs a.i. used per 1 million acres treated.**

Propiconazole + azoxystrobin premix (Quilt) is a premixed combination of two systemic products, a triazole fungicide (propiconazole) that can be used as systemic eradicant and a protectant, and a strobilurin (azoxystrobin). Azoxystrobin is registered for use on soybeans and legume vegetables (dry and succulent) under EPA Reg. No. 100-1164. The combination of these two ingredients in a single retail product would be a convenient and cost effective control measure. **This exemption request is for the use of up to two applications of propiconazole + azoxystrobin (Quilt) for control of soybean rust. Use of propiconazole + azoxystrobin on the subject crops would result in 362,500 lbs a.i. used per 1 million acres treated.**

Under this exemption, up to three applications of the listed products could be used in a given season, provided that no more than two applications may be made with any one active ingredient. On March 28, 2005, the Agency issued an amendment **(Appendix N)** to five fungicide exemptions issued to the state of Minnesota to control soybean rust on soybeans. The amendment revised the number of collective applications that could be made with section 18 fungicides and imposed limitations on total active ingredient applied per season and per year. We ask that the stipulations in the March 28 letter regarding soybeans also apply to this petition for the same fungicides on Crop Groups 6 and 7, if appropriate. We believe that it is important to have consistency between this petition and the soybean petition, and the stipulations are reasonable for both petitions.

Stage of Crop Growth When Treatment Will Be Made:

Use Season: Snap beans constitute approximately 50% of the 60,002 acres of subject crop group acreage in Florida. These beans may be planted from August through April and may be harvested from mid-October through mid-June. Fungicide applications could take place anytime in this window depending upon disease presence.

Due to the large number of crops included in this petition and the different growing seasons under which these crops are grown throughout the United States, the use season will be different for each state requesting a quarantine exemption for these fungicides. In general, applications will begin when symptoms are evident or local conditions indicate a reasonable probability of the existence of the disease locally.

A proposal to monitor the spread of soybean rust is described in **Appendix D**. If approved and funded, sentinel crops will provide an early warning system to growers and government entities.

Additional Restrictions, User Precautions & Requirements of Applicators: Apply products in accordance with the proposed section 18 label and all applicable provisions of the section 3 registered label.

ALTERNATIVE METHODS OF CONTROL (166.20(a)(4))

Registered Alternative Pesticides:

Since different states have different fungicides registered within their state, it is extremely unlikely that all the states subject to this quarantine petition could compile a common list of registered fungicides that can be used to combat soybean rust on the subject crops in every state. This petition is an effort to compile a list of fungicides that the USDA, the EPA, and the states have previously agreed will provide multiple control mechanisms. The rationale for this request is essentially the same as for the soybean quarantine exemption. It is necessary to have a roster of fungicides with different modes of action to minimize the inherent risk of disease resistance to one specific fungicide. It is also unlikely that any particular fungicide would be available in sufficient quantity to meet the anticipated nationwide demand for both soybeans and Crop Groups 6 and 7.

The fungicides listed in this petition are the same ones as requested in the soybean petition. We are therefore requesting that the Agency approve the fungicides in this petition and allow additional states to submit abbreviated information to obtain quarantine exemptions for the fungicides listed herein for use on any of the subject crops.

Alternative Control Practices: Crop rotation, tillage, early planting and use of more tolerant varieties are ineffective management strategies for this disease. *Crop rotation* is a tactic commonly used to avoid exposure to residue-borne diseases. However, soybean rust will survive on many alternative hosts and be air-borne throughout the United States. The pest has already been documented in nine states in the south and central United States (AL, AR, FL, GA, LA, MS, MO, SC, TN). Soybean rust naturally infects 31 legume species in 17 different genera **(Appendix C1).** Therefore, crop rotation is not a workable option. Once inoculum reaches an area, exposure from nearby fields will always be a concern. Furthermore, crop rotations are inadequate as the primary management strategy when environmental conditions are optimal for an epidemic.

Primary tillage reduces infested residue that harbors sources of inoculum. However, soybean rust is caused by an obligate parasite that will survive on alternative hosts (such as kudzu) in areas surrounding fields in the United States, rather than directly in cultivated fields. Tillage will be ineffective in significantly reducing the spread of inoculum sources of soybean rust.

Early planting may help escape the most serious disease buildup. This method may be practical in southern states where weather is less of a factor limiting planting decisions. In southern states there is also the concern that the pest may survive a warm winter season and be infective year-round. Planting dates cannot be adjusted very dramatically in northern production areas as producers are already planting as early as weather allows.

Host resistance is not yet a viable option to control this pest. The pest was first identified in the continental United States in November 2004. The identification and commercialization of resistant plants may take years to accomplish.

In summary, alternative control practices are ineffective or insufficient for the management of this disease. Most cultural control methods will have little effect on a pathogen that has already been identified across a wide swath of the United States. A severe soybean rust epidemic will cause considerable economic damage to the agricultural community in Florida and Tennessee.

EFFICACY OF USE PROPOSED UNDER SECTION 18 (166.20(a)(5))

Efficacy of possible products against Australasian Soybean Rust on Soybeans in support of Crop Groups 6 and 7

There is no efficacy data available that specifically addresses these five fungicides on the subject crop groups. Syngenta Crop Protection has provided the results of trials conducted on soybeans in South America and China. These trials indicate that propiconazole, or mixtures of propiconazole and azoxystrobin are effective in controlling Australasian Soybean Rust **(Appendix K2).**

Dow AgroSciences has provided the results of trials conducted on soybeans in Brazil. These trials indicate that myclobutanil (brand name Laredo) is effective in controlling Australasian Soybean Rust **(Appendix G).** The same trials also confirm that Tilt (propiconazole) and Folicur (tebuconazole) are similarly effective.

Efficacy trials on soybeans using several fungicides, including those requested in this petition, were conducted in Paraguay in 2002-2003 (**Appendix D1**). All of the fungicide treatments provided some degree of control. Due to low disease pressure, the researchers could not draw conclusions about the effectiveness of the fungicides in preventing yield loss.

EXPECTED RESIDUE LEVELS IN FOOD (166.20(a)(6))

See letters of support and the appendices noted below:

Tebuconazole – Tebuconazole residue data is on file with EPA proposing tolerances on succulent beans at 0.1 ppm, bean seed at 0.1 ppm, and other crops (Federal Register March 19, 2001, 66(53):15437-15443) **(Appendix E2)**. Proposed tolerances for tebuconazole in or on soybeans are provided in the enclosed tolerance petition.

The following additional information in support of tebuconazole will be found in **Appendix E3**. Each of the following items is also found on the enclosed disk.

Current tolerances for tebuconazole, 40 CFR Part 184.474.
Bayer CropScience support letter dated April 26, 2005.
Petition for Tolerances, Beans (Succulent and Dry) and Cotton, December 6, 1999.
Petition for Tolerances, Soybean, August 30, 2004.
Notice of Filing, July 1, 2003.
Notice of Filing, Revised, January 1, 2005.
Data Matrix for tebuconazole, August 30, 2004.
Magnitude of Residue, 107916, February 24, 1999.
Magnitude of Residue, 201087, July 27, 2004.
Magnitude of Residue, 201088, July 30, 2004.

Myclobutanil – Indirect or inadvertent residues of myclobutanil of 0.03 ppm for legume vegetables have been established (Federal Register May 10, 2000, 65(91):29963-29973) **(Appendix H1)**. This notice also established a tolerance of 1.0 ppm on succulent snap beans. Current tolerances for myclobutanil, 40 CFR Part 184.443, are provided in this appendix also.

Propiconazole – Syngenta Crop Protection, Inc. has submitted information to the Agency and suggests a time limited tolerance of 2 ppm on Crop Group 6. For Crop Group 7, a time limited tolerance of 10 ppm in/on forage and 25 ppm in/on hay is suggested **(Appendix K1)**. Current tolerances for propiconazole, 40 CFR Part 184.434, are provided in this appendix also.

Trifloxystrobin – Bayer conducted soybean residue trials in the U.S. in 2003. Samples are being analyzed to develop residue data for soybean products **(Appendix L)**. Data currently on file with the U.S. EPA may be useful in setting tolerances for legumes. Current tolerances for trifloxystrobin, 40 CFR Part 184.555, are provided in this appendix also.

Two recent Magnitude of Residue studies for Stratego (trifloxystrobin and propiconazole) on soybean grain fractions and soybean processed commodities (RCTFY005) and soybeans (RCTFY004) are enclosed as **Appendix L2**. Due to the large volume of this data (829 pages), the two entire studies are in separate binders and also provided on the enclosed disks.

Azoxystrobin – 40 CFR Section 180.507 **(Appendix M)** provides the following current tolerances for azoxystrobin: dried shelled peas and beans (except soybeans) 0.5 ppm, succulent shelled peas and beans 0.5 ppm, and edible podded legumes 3.0 ppm. Quilt contains both azoxystrobin and propiconazole. Azoxystrobin is registered for use on soybeans and legume vegetables (dry and succulent) under EPA Reg. No. 100-1164. The combination of these two ingredients in a single retail product would be a convenient and cost effective control measure.

DISCUSSION OF RISK INFORMATION (166.20(a)(7))

Tebuconazole – Risk information has previously been submitted and assessed to support the Section 3 registration of tebuconazole on peanuts. A toxicological profile was published in the Federal Register March 19, 2001 **(Appendix E2)**.

Myclobutanil – Risk information has previously been submitted and assessed to support the Section 3 registration of myclobutanil on numerous crops including grapes, herbs and spices, apples, small fruits, stone fruits, cucurbits, snap beans, tomatoes, and ornamentals. Myclobutanil has not been shown to degrade to 1,2,4-Triazole, a triazole fungicide metabolite of concern to EPA. A toxicological profile was published in the Federal Register May 10, 2000 **(Appendix H1)**.

Propiconazole – Risk information has previously been submitted and assessed to support the Section 3 registration of propiconazole on numerous crops including wheat, oats, barley, rye, rice, wild rice, corn and peanuts. A petition (2F6371), including risk assessment, for the use of propiconazole on soybeans has been submitted to EPA.

Trifloxystrobin – Risk information has previously been submitted and assessed to support the Section 3 registration of trifloxystrobin on numerous crops including cucurbit vegetables, fruiting vegetables, grapes, hops, pome fruits, stone fruits, tree nuts, citrus, potatoes, rice and sugar beets.

Azoxystrobin – Azoxystrobin is considered practically nontoxic to birds, mammals, and bees. Although azoxystrobin is considered highly toxic to fish and highly to very highly toxic to aquatic invertebrates, based on the very low application rates for Quilt, the maximum expected concentrations in adjacent aquatic systems are likely to be below levels of concern **(Appendix O)**.

Propiconazole, tebuconazole, and myclobutanil are triazole fungicides. EPA is evaluating the toxicological significance of triazole metabolites 1,2,4-triazole, triazolylalanine (TA) and triazolylacetic acid (TAA). Of the three metabolites, only 1,2,4-triazole can be considered toxicologically significant and EPA has identified developmental toxicity as the endpoint of concern. The Triazole Task Force has submitted studies to EPA demonstrating a reasonable certainty of no harm for 1,2,4-triazole (MRID 45575501). The summary pages of this report are enclosed **(Appendix Q).**

The fungicides requested in this petition have Section 3 approved uses for many crops. Emergency exemptions for the use of these fungicides on many food crops have been approved by the Agency. These fungicides have recently been approved for use on soybeans in many states under status as a quarantine exemption.

COORDINATION WITH OTHER AFFECTED FEDERAL, STATE, AND LOCAL AGENCIES (166.20(a)(8))

The Florida Department of Agriculture and Consumer Services has conducted a review of the potential hazards posed by the use of these pesticides upon endangered and threatened species in Florida. No unreasonable adverse effects are anticipated as a result of the use of these pesticides as described **(Appendix O).** Other states that participate in this quarantine exemption will provide state specific information as necessary.

NOTIFICATION OF REGISTRANT(166.20(a)(9))

The manufacturers of tebuconazole (Folicur 3.6F - Bayer CropScience; Orius – Makhteshim Agan of North America, Inc.), myclobutanil (Rally, Nova – Dow AgroSciences, Inc.), propiconazole (Tilt - Syngenta Crop Protection, Inc.; PropiMax EC – Dow AgroSciences, Inc, and; Bumper – Makhteshim Agan of North America, Inc.), trifloxystrobin + propiconazole (Stratego - Bayer CropScience), and azoxystrobin + propiconazole (Quilt – Syngenta Crop Protection, Inc.) are aware of and supportive of this request.

Letters of support for legumes have been received from the registrants and are provided in the following appendices:

Appendix E1. Bayer CropScience, tebuconazole.
Appendix F. Makhteshim Agan of North America, Inc., tebuconazole.
Appendix G. Dow AgroSciences, myclobutanil.
Appendix J. Makhteshim Agan of North America, Inc., propiconazole.
Appendix I. Dow AgroSciences, propiconazole.
Appendix K1. Syngenta Crop Protection, Inc., propiconazole and trifloxystrobin.
Appendix L. Bayer CropScience, propiconazole and azoxystrobin.

ENFORCEMENT PROGRAM (166.20(a)(10))

The Florida Department of Agriculture and Consumer Services and the Tennessee Department of Agriculture will take appropriate steps to ensure that the conditions of this exemption are met within their respective states.

REPEAT USES(166.20(a)(11))

This request is the first request for the use of each of the requested products; Folicur, Orius, Rally, Nova, Tilt, PropiMax, Bumper, Stratego, and Quilt on the cited crop groups by all states. A similar quarantine exemption petition was submitted previously to the U.S. EPA by the states of Minnesota and South Dakota for the use of these fungicides to control soybean rust on soybeans. Other states were allowed to submit exemption petitions by citing the Minnesota/South Dakota petition.

PROGRESS TOWARD REGISTRATION (166.25(b)(2)(ii))

See letters of support **(Appendices E1, F, J, K1, L)** for details on the following information:

Tebuconazole – Bayer will be pursuing Section 3 registration of tebuconazole on soybeans following the development and collection of data from residue trials which are underway.

Myclobutanil – The registration of myclobutanil on soybeans is not expected to occur until the completion of the triazole metabolite review by the EPA and the completion of soybean trials in the U.S. Estimated registration date would be 2006.

Propiconazole – Syngenta submitted a petition for the use of propiconazole on soybeans to EPA on September 21, 1994 (PP 5F04424) and submitted a new petition on November 14, 2001 (PP2F6371).

Trifloxystrobin – Bayer will be pursuing Section 3 registration of trifloxystrobin on soybeans following the development and collection of data from residue trials which are underway.

Azoxystrobin – Azoxystrobin is registered for use on soybeans and legume vegetables (dry and succulent) under EPA Reg. No. 100-1164. Quilt, EPA Reg. No. 100-1178, contains the ingredients azoxystrobin and propiconazole.

NAME OF PEST (166.20(c)(1))

Scientific Name: *Phakopsora pachyrhizi* H. Sydow and Sydow.
Common Name: Australasian Soybean Rust, also referred to as Asian Soybean Rust.

ORIGIN OF INTRODUCED PEST (166.20(c)(2))

Australasian soybean rust was discovered in late 2004 in Louisiana, Mississippi, Florida, Arkansas, and several other states. It is believed to have been introduced to the continental United States via any of four hurricanes that occurred in the southeastern U.S. in the summer and fall of 2004. The introduction of this pest in the continental U.S. had been anticipated by the U.S. Department of Agriculture, the U.S. EPA, state regulatory agencies, and state cooperative extension personnel. In 2003, the states of Minnesota and South Dakota submitted a quarantine exemption petition to the U.S. EPA for the use of several fungicides to control this pest on soybeans. The Agency agreed to allow additional states to participate in the soybean quarantine petition by submitting abbreviated state specific information.

Following the discovery of this pest in many states in 2004, it was determined that soybean rust may also severely impact legume crops other than soybeans. The crops listed in Crop Group 6 (which includes soybeans) and Crop Group 7 are believed to be susceptible to soybean rust. Many of these crops have been shown to harbor this pest either in nature or in laboratory inoculation tests.

Soybean rust has the potential of being a widespread, damaging disease, capable of causing losses in all susceptible crop production areas in this country. With more than 6,000,000 million acres of susceptible crops in the United States, industry sources have indicated that a supply of one or two fungicides, including the currently registered products, will likely be insufficient for the vast acreage of these crops potentially affected.

The fungicides requested in this petition are the same as those approved under the soybean exemption, which could create a high demand for these fungicides. The cumulative supplies of several fungicides representing several different products will more than likely be required to combat an outbreak. We do not envision registrants, dealers, or producers stockpiling fungicide to combat a potential outbreak due to the tremendous potential inventory cost for the unused product.

Local conditions demand the ability to choose between several fungicides – one or two products may be found ineffective in the early days of an epidemic. Efficacy is really a local issue. As stated previously, there is no efficacy data available that addresses the requested crop uses. Some data from registrants may be currently on file with EPA pending Section 3 approval for either soybeans or other Crop Group 6 or 7 crops.

Resistance management demands an alternation of chemistries applied, especially for a pathogen that reproduces so rapidly and is spread aerially over great distances. Combination products may prove an effective tool in limiting resistance development, especially the combination of an older multi-site inhibitor, such as chlorothalonil, with one of the newer, systemic compounds, such as the triazoles or strobilurins.

One of the primary issues complicating the detection and control of this pest are the large number of legume hosts that can serve as alternative hosts for soybean rust. In addition to soybean, there are more than 90 species of legumes that are reported to be hosts for soybean rust (**Appendix B**). There is a great threat for inoculum production on a widespread weed host in the United States, *Pueraria montana* var. *lobata* commonly known as kudzu.

IMPACT OF THE PEST (166.20(c)(3))

Product cost must be considered in selecting efficacious products. Additional applications of fungicides could cost about $24 to $30 per acre depending upon the number of applications made and the cost of the fungicide. These are new costs to production. A selection of products should be made available to allow for reasonable soybean rust management under various economic management situations. Also, a variety of fungicides are needed to provide adequate supplies of efficacious fungicides at reasonable prices thereby avoiding market-induced high prices.

Nationally, the subject crops account for 6,026,018 planted acres, and $1,855,154,390 value of production. The Florida Department of Agriculture and Consumer Services obtained crop acreage and crop value information from 45 states. This information is presented in **Appendix A**. The tables within this appendix provide individual state information, separate summaries for Crop Group 6 (excluding soybeans) and Crop Group 7, and a total summary for Crop Groups 6 and 7 combined.

The total value of Florida crops subject to this petition is in excess of $240,000,000. In Tennessee, the total crop value is estimated at approximately $30,000,000. It is unlikely that any state will suffer complete losses due to this pest. **Appendix C1** reports soybean losses of 10-80% in Africa, 15-40% in Japan, and 20-30% in Taiwan. We can only assume that soybean rust can result in comparable losses in Crop Groups 6 and 7 crops.

APPENDICES

A Acreage and Financial Value of Crop Groups 6 (excluding soybeans) and 7

B National Pest Alert Soybean Rust; USDA-CSREES Integrated Pest Management Centers

C Known Host Crops for *Phakopsora pachyrhizi* (Asian Soybean Rust); USDA

C1 New Pest Advisory Group Data: *Phakopsora pachyrhizi,*
Draft December 9, 2002, NPAG/USDA/APHIS/PPQ

D Proposal to Monitor the Spread of Asian Soybean Rust

D1 Summary of USDA Fungicide Efficacy Trials to Control Soybean Rust in Paraguay 2002-2003

E Tebuconazole (Folicur) Performance on Asian Soybean Rust in Brazil in 2004; Bayer CropScience

E1 Tebuconazole (Folicur) Support Letter from Bayer CropScience
Folicur Section 18 Label
Folicur Section 3 Label

E2 Federal Register, Monday, March 19, 2001, Pages 15437-15443. Proposes tolerance of 0.1 ppm tebuconazole on succulent beans, seed beans, and other crops.

E3 Tebuconazole tolerances, 40 CFR Part 180.474
Bayer CropScience transmittal letter to Florida Dept. of Agriculture & Consumer Services
Bayer CropScience transmittal letter to EPA re Soybeans
Petition for Tolerances, Tebuconazole, Beans and Cotton
Petition for Tolerances, Tebuconazole, Soybeans
Notice of Filing, July 1, 2003
Notice of Filing, January 1, 2005 (revision)
Tebuconazole Data Matrix, August 30, 2004
Magnitude of Residue, Folicur, 107916, Fresh Beans and Dry Beans
Magnitude of Residue, Folicur, 201087, Soybeans
Magnitude of Residue, Folicur, 201088, Soybean Grain Fractions and Soybean Processed Commodities

F Tebuconazole (Orius) Support Letter from Makhteshim Agan of North America Inc.

Orius Section 18 Label
Orius Section 3 Label

G Myclobutanil (Nova) Support Letter from Dow AgroSciences LLC
Efficacy Trials to Control Soybean Rust in Brazil
Nova Section 18 Label
Nova Section 3 Label

H Myclobutanil (Rally)
Rally Section 18 Label
Rally Section 3 Label

H1 Federal Register, Wednesday, May 10, 2000, Pages 29963-29973. Proposes tolerance of 1.0 ppm myclobutanil on succulent snap bean.
Myclobutanil tolerances, 40 CFR Part 180.443

I Propiconazole (PropiMax) Support Letter from Dow AgroSciences LLC
PropiMax Section 18 Label
PropiMax Section 3 Label

J Propiconazole (Bumper) Support Letter from Makhteshim Agan of North America Inc.
Bumper Section 18 Label
Bumper Section 3 Label

K Propiconazole (Tilt)
Tilt Section 18 Label
Tilt Section 3 Label

K1 Propiconazole (Tilt) Support Letter from Syngenta Crop Protection, Inc. with Residue Information
Propiconazole tolerances, 40 CFR Part 180.434

K2 Efficacy of Propiconazole, and Propiconazole + Azoxystrobin Mixtures Against Asian Soybean Rust in Soybeans; Syngenta Crop Protection, Inc.

L Trifloxystrobin (Stratego) Support Letter from Bayer CropScience
Trifloxystrobin tolerances, 40 CFR Part 180.555
Folicur Section 18 Label
Folicur Section 3 Label

L1 Trifloxystrobin (Stratego) Performance on Asian Soybean Rust in Brazil in 2004

L2 Magnitude of Residue, Stratego, RCTFY005, Soybean Grain Fractions and Soybean Processed Commodities
Magnitude of Residue, Stratego, RCTFY004, Soybeans

M Azoxystrobin (Quilt)
Quilt Section 18 Label

N March 28, 2005 letter from the U.S. EPA to the Minnesota Department of Agriculture amending provisions of soybean Section 18 fungicides

O Endangered/Threatened Species Review for subject fungicides for Florida

P Support Letter from University of Florida, Institute of Food and Agricultural Sciences

Q Profile of Triazole-derivative Fungicide Compounds and their Common Metabolites (MRID 45575501)