

# *Interstate Pest Control Compact*

## *2000 Annual Report*

Arizona  
Arkansas  
California  
Delaware  
Florida  
Georgia  
Illinois  
Kansas  
Maine  
Maryland  
Michigan  
Minnesota  
New Hampshire  
New Jersey  
New Mexico  
North Dakota  
North Carolina  
Ohio  
Oklahoma  
Oregon  
Pennsylvania  
Puerto Rico  
Rhode Island  
South Carolina  
Tennessee  
Texas  
Utah  
Vermont  
Virginia  
Washington  
West Virginia  
Wyoming

**Chairman:**

The Honorable Henry A. Virts  
Secretary  
Maryland Department of Agriculture  
50 Harry S Truman Parkway  
Annapolis, Maryland 21401  
(410)841-5880  
fax (410)841-5914

**Executive Director:**

William W. Metterhouse  
Interstate Pest Control Compact  
c/o National Association of State  
Departments of Agriculture  
1156 15th Street, N.W., Suite 1020  
Washington, D.C. 20005  
(202)296-9680  
fax (202)296-9686  
email nasda@patriot.net

# Interstate Pest Control Compact

## 2000 Annual Report

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## 2000 IPCC Annual Report

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## Introduction

Each year billion of dollars of damage is caused by plant pests - insects, weeds, plant diseases, and other organisms that attack U.S. crops and forest resources. Many of the same pests also attack lawns, gardens, and the general environment, causing still more damage in dollars and esthetics. These pests don't recognize political boundaries. They can easily move across state lines on the wind or in soil or water, or hitchhike to new areas with goods, vehicles, or people. Tremendous losses occur even though farmers, industry, and local, state, and federal governments spend billions each year on control.

At one time, only coastal and border states had to fear infestations of new foreign plant pests, but today heartland states are also at risk. International containerized cargo with the potential for carrying foreign pests can travel through ports of entry and reach interior states before it can be opened and inspected.

Federal and state agencies have ongoing control and regulatory programs against a number of plant pests, and many have recently stepped up their pest detection and monitoring efforts. In most cases, however, appropriations are earmarked for specific pests - a mere handful of the 10,000-odd species that cause damage in this country. In general, too, state funds may be spent only on in-state control, even though pests just across the border may be equal threats. If a single state undertakes necessary pest control activities, on its own or with federal assistance, it cannot be certain that companion measures will be taken in other states.

Often the budget process does not allow governments to move quickly against newly introduced pests or take on challenges outside already approved program plans, a particular problem in times of decreasing resources. Technology is available to control or eliminate many pests, but its effectiveness often depends on speedy action.

The Interstate Pest Control Compact was instituted in 1968 under the Council of State Governments to bridge economic and jurisdictional gaps among state and federal governments, to enable agencies to respond to plant pest infestations. The Compact, through the Insurance Fund it administers, provides financial assistance to address:

- new and economically significant destructive plant pest outbreaks;
- plant pest infestations outside the control or means of a single jurisdiction; or
- destructive single-state outbreaks which could affect other states if allows to spread.

## Funding

The basis for determining the amount of funds to be appropriated from each of the participating states is as follows: 1/10th of the total budget of \$1 million in equal shares (i.e. \$100,000), and the remainder in proportion to the value of agricultural and forest crops and products, excluding animals and animal products produced in each party state. This is not an annual appropriation, but has been a one-time contribution to the Insurance Fund. It is conceivable that, if Compact funds were appreciably depleted in carrying out a containment or eradication program, a state could be assessed its proportional share to return Compact funds to the \$1 million Insurance Fund level. However, with investment income, this does not appear likely.

## How the Fund Operates

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The Compact provides that any party state can apply to the Insurance Fund for financial support of pest control or eradication activities which it wishes to have undertaken or intensified in one or more other party or, in limited circumstances, in nonparty states. When a pest is found in another state that constitutes a threat to valuable agricultural or forest crops or products within the applying state, the Insurance Fund can provide financial support for control or eradication measures. State parties to the Compact are expected to maintain their existing pest control programs at normal levels aside from any assistance from the Insurance Fund. This safeguards the soundness of the Fund and assures that it will be used to apply the additional thrust necessary to combat outbreaks, which otherwise would not be controlled.

The Insurance Fund is under the control of a Governing Board, consisting of an official representative of each party state chosen by that state in accordance with its own laws. An Executive committee, consisting of the chairman and a representative from each of the four regions, is authorized to exercise certain responsibilities for the Governing Board when the Board itself does not meet.

A Technical Advisory Committee has been established to assist the Governing Board with the technical information necessary to make a decision on whether or not the Compact should be invoked on any particular requests.

The Technical Advisory Committee is composed of two state plant control officials from each of the four regions of the Plant Boards, together with a representative of the U.S. Animal and Plant Health Inspection Service and a representative of the U.S. Forest Service.

When a request is filed for invoking the Compact, the request is referred to the ten-member Technical Advisory Committee, which makes a study of the request and a recommendation on the feasibility of the project to the Governing Board. In an emergency, the Committee could make this recommendation within 72 hours or less after receiving the initial request for Compact assistance. The members of the Interstate Pest Control Compact Technical Advisory Committee for 2000 are the following:

Central

David Nelson, North Dakota  
Dan Madison, Ohio

Eastern

Charles Coffman, W. Virginia  
Carol Lemmin, Connecticut

Southern

Gene Cross, North Carolina  
Gray Haun, Tennessee

Western

John Caravetta, Arizona  
Linda Polzin, Washington

USDA/APHIS

Jerry Fowler

USDA/Forest Service

Tom Hofacker

INTERSTATE PEST CONTROL COMPACT  
Annual Report

William W. Metterhouse  
Executive Director IPCC  
September 23, 2000

Presently there are 32 States that are members of the Compact. During the past year four states have joined the Compact; Arkansas, Oklahoma, Rhode Island, and Washington.

Most of my efforts continue, on a monthly basis, is to contact non-member states encouraging their membership in the IPCC. Most state indicate their desire to become members, however, budgetary restraints hinder their enrollment. A number of states continue to request, through their budgetary process, legislation and funding for the Compact. At the present time I spend approximately 15 hours a month on recruitment efforts.

Efforts to seek funds from agricultural organizations have been discouraging, however, efforts will continue.

More recent grants approved by the Compact include the following:

In April 1999 a grant was approved for \$75,000 to the State of Florida for efforts to retard the spread of the tomato yellow leaf curl virus. This IPCC grant is now completed, however, research continues. Thus far, a progress report indicates several chemicals that provide very good protection to tomato transplants against virus carrying whiteflies. In addition, several chemicals were found to have repellency and show promise as possible new approaches to protecting transplants from virus transmission.

On July 1, 2000 a \$20,000 grant was approved for the State of Oregon for survey and control of the Small (clover) Broom Rape, *Orobanche minor*. This weed was found in a red clover field near Auroa (Clackamas Co.) This is an introduced exotic plant that poses a potential threat to economically important crops such as clover and other legumes. Heavy infestation can cause total crop failure. Small broomrape is a parasitic weed that attaches to the roots of other plants for nutrients and water.

Oregon is one of major producers of clover and alfalfa seed. This is a matching fund request with the Oregon Dept of Agriculture and the USDA. This request was supported by the member States of California and Utah.

It is interesting to note that since the establishment of the Compact there have been 22 grants approved for the states.

Chair	Henry A. Virts, Maryland
Vice Chair	Thomas Masso, Minnesota
Secretary	William Lyons, California
Treasurer	Carlton Courter, Virginia

**Executive Committee • 1999-2000**

Chair	Henry A. Virts, Maryland
Midwestern Region	Fred Dailey, Ohio
Northeastern Region	John Tarburton, Delaware
Southern Region	James A. Graham, North Carolina
Western Region	William Lyons, California

**Member States by Year Joined (32)**

West Virginia	1968	Vermont	1978
Pennsylvania	1968	New Mexico	1981
Michigan	1968	Oregon	1981
New Hampshire	1968	Georgia	1984
Illinois	1968	Utah	1985
Tennessee	1969	Maine	1986
Minnesota	1969	Arizona	1994
Delaware	1969	Texas	1994
California	1969	Puerto Rico	1994
New Jersey	1970	Florida	1995
South Carolina	1972	Kansas	1996
North Dakota	1973	Wyoming	1996
Virginia	1974	Washington	1999
Ohio	1974	Arkansas	1999
North Carolina	1975	Oklahoma	1999
Maryland	1976	Rhode Island	1999

INTERSTATE PEST CONTROL COMPACT  
Minutes 1999 Annual Meeting  
Sunday September 26, 1999  
Holiday Inn, St. George, Utah

MEMBERS PRESENT

Arizona--Sheldon Jones  
Arkansas--Don Alexander  
California--Williams Lyons  
Georgia--Tommy Irvin  
Maryland--Henry Virts  
Michigan--Dan Wyant  
Minnesota--Thomas Masso

New Jersey--Art Brown  
North Carolina--Jim Graham  
North Dakota--Roger Johnson  
Puerto Rico--Carlos A. Flores Ortega  
South Carolina--Neil Ogg  
Vermont--Leon Graves

CALL TO ORDER

The meeting was called to order at 9:00am by Chairman, Sheldon Jones, Thirteen states were reported present as indicated above.

TREASURER'S REPORT

Carlton Courter, Treasurer was unable to attend the NASDA meeting. Sheldon Jones, Chairman presented the prepared report. A fund balance as of June 30,1999 was \$1,001,511.38. It was reported that resulting from the transfer of funds from Illinois to the new Treasurer Carlton Courter in Virginia there was a loss of 46,721,16. There was concern expressed by the membership as to how this loss occurred. The Executive Director was directed to determine the facts in this loss.

The Treasurer's report place four items for discussion by the membership as follows:

- 1- It would be beneficial to have an entity such as NASDA provide support for the Treasurer if the IPCC is avoid a loss in the value of assets, such as the loss incurred this year, when the assets are transferred between states due to a change of Treasurer.
- 2- NASDA can provide financial support to include writing checks, depositing membership dues, and preparing annual financial statements for the annual fee of \$1000. This is in addition to the \$1000 currently paid for administrative support. The Treasurer's approval of disbursements could be obtained by FAX.
- 3- NASDA can also provide investment services at a fee of \$10,000 annually. However, a bank or brokerage firm could provide this service at a much smaller fee. Investment fees and expenses were under \$2,000 last fiscal year.

- 4- The Compact should develop an investment policy defining how the Compact's assets should be invested, i.e. money markets (low risk), government bond funds (medium risk), equity funds (high risk).

After discussion the membership did not support these recommendations and suggested that the Treasurer continue financial practices as were conducted in the past. However, it was recommended that an Investment Committee be appointed to work with Carlton Courter, Treasurer. The following members were appointed: Tommy Irvin, Georgia, Art Brown, New Jersey, and Leon Graves, Vermont.

The Treasurer's report was approved as read.

## ELECTION OF OFFICERS

The Chairman opened the floor for nominations for officers. It was moved that Henry Virts of Maryland serve as Chairman, Thomas Masso, of Minnesota serve as Vice Chairman, Carlton Courter of Virginia continue to serve as Treasurer, and William Lyons serve as Secretary. The slate of officers were approved as indicated above.

## EXECUTIVE DIRECTOR'S REPORT

Presently there are 30 states that are now members of the Compact. Since the Mid-Winter meeting the State of Washington has joined the Compact. Washington elected to pay their full membership fee. Arkansas also joined selecting to pay their membership fee over a six year period. The States of Oklahoma and Rhode Island have indicated their desire to become members. Invoices have been sent to both states.

Most of the Directors efforts, on a monthly basis, is to continue contacts with all non-member states. Most state desire to become members, however, budgetary restraints hinder their becoming members. Many states continue to request, through their state budgetary process, legislation and funding in their efforts to become member.

Efforts continued to seek funding from the major agricultural organizations. Responses have been discouraging, however, fund raising efforts continue. This efforts seeks to raise large amounts of monies (\$5,000) plus funds from potential contributors.

In April 1998 the Compact approved a grant of \$12,093 to the State of Kansas for the eradication of the Grecian Foxglove, a noxious weed. This weed was found infesting 120 acres in one county. A combination of hand-pulling of blooming plants and a wider delimiting survey was convened. Three small new infestations within one-quarter mile of the main infestation have been located and marked with flags for chemical treatment. During the past winter a color educational brochure was developed. Seven hundred and fifty copies were printed and distributed to local area extension agents, USDA-NRCS, Kansas Department of Wildlife and Parks, and

county noxious weed directors.

In January 1999 the Compact received a request for financial assistance for \$100,000 from the State of Illinois for the eradication of the Asian Long-horned beetle which was discovered in three areas of Northeastern Illinois, primarily the Chicago area. This request was approved by the Technical Advisory Committee. The Compact membership further approved the dispersal of funds to the State of Illinois at the Mid-Winter Meeting on February 20, 1999.

On March 25, 1999 an application for funds was received from the Minnesota Department of Agriculture in the amount of \$12,768. These funds were to be used to conduct a one year survey in the State of Minnesota for common barberry, the source of inoculum of the black stem wheat rust. The purpose of the survey was to examine selected sites to determine if the potential exists for barberry to re-emerge and spread to larger areas of the wheat producing states. This application was denied by the Technical Advisory Committee. It was recommended the state should attempt to seek funds from the USDA CAPS programs (Cooperative Agricultural Pest Survey).

On May 26, 1999 the Florida Department of Agriculture submitted an application for financial assistance in the amount of \$75,167 for research to retard the spread of tomato yellow leaf curl virus (TYLCV) and hopefully reduce the production losses which will result if the disease becomes widely established. The four objectives of the project are:

- 1- Identify approaches which interfere with whitefly feeding behavior and reduce transmission of TYLCV.
- 2- Evaluate new approaches for reducing whitefly movement into production houses.
- 3- Evaluate plant growth promoting rhizobacteria for protection of plants from infection by TYLCV.
- 4- Identify which plants species commercially produced in Florida are susceptible to infection by TYLCV.

This application was approved by the Technical Advisory Committee and Compact Executive Committee. A check was authorized to be sent to the State of Florida.

The Executive Director indicated that there was some concern by the Advisory Committee as to whether research as being proposed by Florida met the guidelines for granting funds. After some discussion it was recommended that grant applications should be of regulatory concern, cost sharing, in addition to the criteria as stated in the Compact Constitution. It was further recommended that the Executive Director review the granting criteria for Board discussion.

INTERSTATE PEST CONTROL COMPACT  
Minutes 2000 Mid-Winter Meeting  
Sunday, March 4, 2000  
Washington, D.C.

I Roll Call of States

Chairperson Henry Virts (Md) called the meeting to order at 8:30 a.m. The Secretary Vanessa S. Arellano (Ca) took attendance.

Arizona–Sheldon Jones  
Arkansas–Don Alexander  
California–Juan J. Villarreal & Vanessa S. Arellano  
Delaware–Jack Tarburton  
Georgia–Tommy Irvin  
Maryland–Henry Virts  
Minnesota–Thomas Masso  
Pennsylvania– Samuel Hayes  
Rhode Island–Kenneth Ayars  
South Carolina–Neil Ogg  
Virginia–Carlton Courter  
West Virginia–Gus Douglas

II Approval of Minutes

The minutes of the 1999 Annual Meeting in St. George, Utah on Sunday, September 26, 1999 were moved approved by Jack Tarburton, Seconded by Don Alexander and passed unanimously.

III Chairperson's Report

A re-cap of the loss posted to the Compact's account due to the transfer of funds from Illinois to Virginia due to the Change of the Treasurer.

IV Treasurer's Report

A prepared report was read indicating a balance on January 31, 2000 of \$990,014.86 Mr. Metterhouse also reported the following membership payments:

Arkansas: Made first payment  
Washington: total payment of \$42,000  
Kansas: third payment made

Florida: final year payment (amortized over 6 years)  
Oklahoma: first year's payment (amortized over 6 years)

The Treasurer's Report was moved approved on a first by Sheldon Jones (AZ) and a second by (MN).

V. Election of Officers

There was no election of officers at this meeting.

VI. Executive Director's Report

Executive Director Bill Metterhouse reported that there were a total of 32 states that are members of the Compact. Arkansas, Rhode Island and Washington are new members of the Compact. He reported that New York was trying to get into the Compact, but was having difficulty getting the legislation through the New York State Legislature. The Commissioner from New York is still actively working on securing the necessary funding to join the Compact.

The Executive Director is still working on getting more members, however, legislators are the stumbling block. Iowa has no interest at this time in joining, however may be interested in the future. Agricultural organizations and Industry representatives are not supportive of the Compact soliciting \$5000 or more from the industry.

At this point, Commissioner Gus Douglas (WV) reminded the Compact members that several industry representatives were attending the NASDA conference. Companies mentioned were Monsanto and DowAgro Science. The State of Delaware is currently working with DuPont on several issues.

The Compact has allocated \$100,000 to Illinois to combat the Asian Long-horned Beetle and \$75,000 to Florida because of the Tomato Yellow Leaf Curl Virus. Florida has submitted a progress report on how its experiments are proceeding.

Pennsylvania is preparing a \$100,000 request to offset costs for a survey totaling \$436,000 for Plum Pox virus. This request will have to go through the same procedures, as any other request is required. The State of Oregon may submit a funding request for a particular weed that they have to battle. The typical procedure is that a request is forwarded to the Technical Advisory Committee for two weeks and then it is submitted to the Executive Committee for approximately two weeks. This process was approved on a motion made by (NJ). It was seconded by (MN) and passed unanimously.

VII. Old Business

There was no discussion at this time.

VIII. New Business

Jack Tarburton made a motion to send a letter from the Compact to the Office of Management and Budget in support of funding for \$5.1 million for the indemnification process to release funds for Plum Pox in Pennsylvania. This was seconded by South Carolina and unanimously approved.

IX. Adjourn

The meeting was adjourned at 10:00 a.m.

**INTERSTATE PEST CONTROL COMPACT  
INSURANCE FUND**

**FINANCIAL STATEMENTS**

**For the period July 1, 1998 - June 30, 1999**

**INTERSTATE PEST CONTROL COMPACT  
BALANCE SHEET  
June 30, 1999**

**Assets**

Operating Account	\$49,594.63 <sup>1</sup>	
Investments	<u>951,916.75</u> <sup>2</sup>	
TOTAL ASSETS		<u><u>\$1,001,511.38</u></u>

**Liabilities & Equity**

NASDA per Agreement	\$1,000.00	
Equity	<u>1,000,511.38</u>	
TOTAL LIABILITIES & EQUITY		<u><u>\$1,001,511.38</u></u>

**1 \$40,000 transferred to Investment account on July 22, 1999.**

**2 Funds are invested in the Local Government Investment Pool (LGIP) through the Commonwealth of Virginia's Treasurer's Office. The average interest rate has been 5%.**

**INTERSTATE PEST CONTROL COMPACT  
STATEMENT OF REVENUES, EXPENDITURES, & CHANGES IN  
FUND BALANCES/EQUITY**

For the fiscal year ended June 30, 1999

*Revenues*

Investment Income	\$58,345.37	
Dues Income	34,029.00	
Operating Account Interest	<u>729.67</u>	
Total revenues		\$93,104.04

*Expenditures*

Operating Expenses	\$11,740.01	
Investment Fees & Expenses	1,849.29	
Insurance Claims	112,093.00	
Total expenses		<u>125,682.30</u>

*Excess of revenue over expenditures* (\$32,578.26)

*Other financing uses*

Loss in value of assets at time of transfer (46,721.16)

*Fund balances/equity July 1, 1998* 1,080,810.80

*Fund balances/equity June 30, 1999* \$1,001,511.38

**INTERSTATE PEST CONTROL COMPACT  
STATEMENT OF CASH FLOWS  
For the fiscal year ended June 30, 1999**

Balance on July 1, 1998			\$1,080,810.80
<b>Add - Inflows</b>			
Investment Income:			
LGIP	15,305.66		
National City Bank	<u>43,039.71</u>	58,345.37	
Dues Income:			
Florida	6,557.00		
Kansas	4,786.00		
Washington	21,426.00		
Puerto Rico	<u>1,260.00</u>	34,029.00	
Operating Account Interest		<u>729.67</u>	93,104.04
<b>Deduct-Outflows</b>			
Operating Expenses:			
Executive Director	9,596.58		
Bank Service Charges	400.28		
NASDA Conference	150.00		
NASDA Agreement	1,000.00		
Bond Policy Renewel	100.00		
Printing	444.15		
Checks	<u>49.00</u>	11,740.01	
Investment Fees & Expenses		1,849.29	
Insurance Claims			
Illinois-Asian Long Horned Beetle		100,000.00	
Kansas-Grecian Foxglove		12,093.00	
Loss - value of investments at time of transfer		<u>46,721.16</u>	<u>(172,403.46)</u>
Balance on June 30, 1999			\$1,001,511.38

**INTERSTATE PEST CONTROL COMPACT  
OPERATING BUDGET  
July 1, 1998 to June 30, 1999**

<u>Description</u>	<u>Budget</u> <u>1998-1999</u>	<u>Actual</u> <u>1998-1999</u>	<u>Budget</u> <u>1997-1998</u>	<u>Actual</u> <u>1997-1998</u>
<b>NASDA Contracts</b>				
Administration	\$ 2,000.00	\$ 1,000.00	\$ 2,000.00	\$ 1,000.00
Metterhouse	10,000.00	8,100.00	10,000.00	7,920.00
Travel & Miscellaneous	3,500.00	1,646.58	3,500.00	1,824.34
Printing	500.00	444.15	500.00	415.15
Bond for Treasurer	100.00	100.00	100.00	100.00
Audit	150.00	0.00	150.00	800.00
Postage & Miscellaneous- Secretary's Office	150.00	0.00	150.00	0.00
Bank Charges	0.00	449.28	0.00	0.00
Technical Committee	0.00	0.00	0.00	0.00
Special Committee	<u>500.00</u>	<u>0.00</u>	<u>500.00</u>	<u>0.00</u>
TOTALS	\$16,900.00	\$11,740.01	\$16,900.00	\$12,059.49

Interstate Pest Control Compact  
Discussion Points for Treasurer's Report  
September 1999

Highlights from fiscal year 1999:

- Total assets available at June 30, 1999 were \$1,001,511.
- Income on investments totaled \$59,075.
- Membership dues totaling \$34,029 were received from the states of Florida, Kansas, Washington and Puerto Rico.
- Insurance claims of \$112,093 were paid out - \$100,000 to Illinois for Asian Long Horned Beetle and \$12,093 to Kansas for Grecian Foxglove.
- A loss of \$46,721 was incurred when the assets were sold and transferred to Virginia from Illinois. The loss was due to the difference between the asset carrying value on the date of sale versus the principal amount of the shares.

Topic for discussion involving investment and maintenance of assets:

- It would be beneficial to have an entity such as NASDA provide financial support for the Treasurer of the IPCC to avoid a loss in the value of assets, such as the loss incurred this year, when the assets are transferred between states due to a change of Treasurer.
- NASDA can provide financial support to include writing checks, depositing membership dues, and preparing annual financial statements for an annual fee of \$1,000. This is in addition to the \$1,000 currently paid for administrative support. The Treasurer's approval of disbursements could be obtained by FAX.
- NASDA can also provide investment services at a fee of \$10,000 annually. However, a bank or brokerage firm could provide this service at a much smaller fee. Investment fees and expenses were under \$2,000 last fiscal year.
- The Compact should develop an investment policy defining how the Compact's assets should be invested, i.e. money markets (low risk), Government bond funds (medium risk), equity funds (high risk).



## COMMONWEALTH of VIRGINIA

**J. Carlton Courter, III**  
Commissioner

### Department of Agriculture and Consumer Services

PO Box 1163, Richmond, Virginia 23218  
Phone: 804/786-3501 • Fax: 804/371-2945 • Hearing Impaired: 800/828-1120  
<http://www.state.va.us/~vdacs/vdacs.htm>

October 14, 1999

Mr. William W. Metterhouse  
Executive Director  
Interstate Pest Control Compact  
c/o NASDA, Suite 1020  
1156 15<sup>th</sup> Street, N.W.  
Washington, D.C. 20005

Dear Bill:

As requested, I am writing to you to discuss the \$46,721 loss that was incurred on the Interstate Pest Control Compact's investments when the Compact's funds were transferred from Illinois to Virginia in February. Prior to February of this year, the funds of the Compact were being held in a mutual fund at National City Bank in Illinois. The Illinois Department of Agriculture was instructed to transfer the funds to Virginia since Commissioner Courter was now serving as Treasurer of the Compact.

Theodore (Ted) Tracy was my contact at the Illinois Department of Agriculture. As far as I know he was given no further instruction by the Compact, and contacted National City, the bank holding the mutual fund, to transfer the funds to Virginia. The transfer took place on February 23, 1999 when the mutual fund shares were trading at \$9.24 per share. At that time, the asset carrying value of the shares were \$46,721 less than the principal amount invested in 1993. In 1993, the funds were invested in the Parkstone U. S. Government Income Fund, a bond fund.

As you know, for the past few years, the value of stock investments has been increasing and the value of bond investments have been decreasing. The loss reported in the IPCC's 1998-1999 Financial Statements reflects the downward trend in the bond market since 1993 when interest rates were higher. However, the Parkstone U. S. Government Income Fund is a relatively low risk investment and an appropriate choice for investing the Compact's funds based on the currently limited guidelines in the by-laws.

It should be noted that the mutual fund earned investment income of \$43,040 from July 1, 1998 to the date of transfer. The money was invested

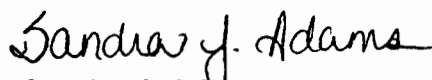
through the Local Government Investment Pool with the Treasurer of Virginia in February and earned an additional \$15,306 from February to June 30, 1999. The net gain for the year was \$11,625. Hence, there was no loss on the original value of membership payments.

I spoke with Robert Whitner at National City Bank last week. He said the loss may have been avoided if the money was transferred to a similar type account in Virginia, but that could have taken up to six months. As far as I know, Illinois did not have any type of instruction from the Compact as to how or when the funds should be transferred. There is, of course, no guarantee as to what the value of the mutual fund would have been six months out.

The committee you are currently serving on may want to consider developing an investment policy for the Compact. The policy should address the type of investments the Compact would like to pursue in light of their estimated needs for cash on an annual basis, the amount of risk they are willing to accept in relation to the desired rate of return, and what entity should hold and manage these investments for the Compact. The entity should not be a state department of agriculture given the nature of the duties and responsibilities associated with this investment function. As I mentioned previously, the funds are currently held by the Treasurer's Office here in Virginia. This is a low risk investment and the annual yield for the fiscal year ended June 30, 1999 was 5.20%. The total assets of the Compact are sufficient to consider the investment of a portion of these assets in instruments that would offer a higher rate of return.

Please call me at (804) 786-3506 if you need any additional information. Mr. Whitner of National City Bank can be reached at (217) 753-7006. Ted Tracy's phone number at the Illinois Department of Revenue is (217) 785-5560.

Sincerely,



Sandra J. Adams  
Director of Finance

Attachment

cc: J. Carlton Courter, III  
Commissioner

Donald G. Blankenship  
Deputy Commissioner

Theodore (Ted) F. Tracy  
Illinois Dept. of Agriculture

# **INTERSTATE PEST CONTROL COMPACT INSURANCE FUND**

## **MID-YEAR BUDGET REPORT**

**For the period July 1, 1999 - January 31, 2000**

**INTERSTATE PEST CONTROL COMPACT  
OPERATING BUDGET  
July 1, 1999 to January 31, 2000**

<u>Description</u>	<u>Budget</u> <u>1999-2000</u>	<u>Actual</u> <u>1999-2000</u>	<u>Budget</u> <u>1998-1999</u>	<u>Actual</u> <u>1998-1999</u>
<b>NASDA Contracts</b>				
<b>Administration</b>	<b>\$2,000.00</b>	<b>0.00</b>	<b>\$2,000.00</b>	<b>1,000.00</b>
<b>Metterhouse</b>	<b>10,000.00</b>	<b>4,815.00</b>	<b>10,000.00</b>	<b>8,100.00</b>
<b>Travel &amp; Miscellaneous</b>	<b>3,500.00</b>	<b>1,199.63</b>	<b>3,500.00</b>	<b>1,646.58</b>
<b>Printing</b>	<b>500.00</b>	<b>339.03</b>	<b>500.00</b>	<b>444.15</b>
<b>Bond for Treasurer</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Audit</b>	<b>150.00</b>	<b>0.00</b>	<b>150.00</b>	<b>0.00</b>
<b>Postage &amp; Miscellaneous- Secretary's Office</b>	<b>150.00</b>	<b>0.00</b>	<b>150.00</b>	<b>0.00</b>
<b>Bank Charges</b>	<b>0.00</b>	<b>75.45</b>	<b>0.00</b>	<b>449.28</b>
<b>Technical Committee</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Special Committee</b>	<b><u>500.00</u></b>	<b><u>0.00</u></b>	<b><u>500.00</u></b>	<b><u>0.00</u></b>
<b>TOTALS</b>	<b>\$16,900.00</b>	<b>\$6,429.11</b>	<b>\$16,900.00</b>	<b>\$11,740.01</b>

**INTERSTATE PEST CONTROL COMPACT**

**STATEMENT OF CASH FLOWS**

**July 1, 1999 to January 31, 2000**

<b>Balance on June 30, 1999</b>			<b>\$1,001,511.38</b>
<b>Add - Inflows</b>			
<b>Investment Income:</b>			
<b>LGIP</b>	<b>31,130.42</b>		
<b>Interest on Checking</b>	<b><u>201.23</u></b>	<b>31,331.65</b>	
<b>Dues Income:</b>			
<b>Arkansas</b>	<b>3,954.00</b>		
<b>Washington</b>	<b>21,426.00</b>		
<b>Kansas</b>	<b>4,786.00</b>		
<b>Florida</b>	<b>6,557.00</b>		
<b>Oklahoma</b>	<b><u>2,070.00</u></b>	<b><u>38,793.00</u></b>	<b>70,124.65</b>
<b>Deduct - Outflows</b>			
<b>Operating Expenses:</b>			
<b>Executive Director</b>	<b>4,831.00</b>		
<b>Bank Service Charges</b>	<b>100.51</b>		
<b>NASDA Conference</b>	<b>1,183.63</b>		
<b>Printing</b>	<b><u>339.03</u></b>	<b>6,454.17</b>	
<b>Insurance Claims:</b>			
<b>Florida-TYLCV</b>		<b><u>75,167.00</u></b>	<b><u>-81,621.17</u></b>
<b>Balance on January 31, 2000</b>			<b>\$990,014.86</b>

**INTERSTATE PEST CONTROL COMPACT  
INSURANCE FUND**

**FINANCIAL STATEMENTS**

**For the period July 1, 1999 - June 30, 2000**

**INTERSTATE PEST CONTROL COMPACT  
BALANCE SHEET  
June 30, 2000**

**Assets**

Operating Account	\$8,141.39	
Investments	<u>1,002,996.72</u>	1
<b>TOTAL ASSETS</b>		<b>\$1,011,138.11</b>

**Liabilities & Equity**

Liabilities	\$0.00	
Equity	<u>1,011,138.11</u>	
<b>TOTAL LIABILITIES &amp; EQUITY</b>		<b>\$1,011,138.11</b>

**1 Funds are invested in the Local Government Investment Pool (LGIP) through the Commonwealth of Virginia's Treasurer's Office. The average interest rate for the month ended June 30, 2000, was 6.54% with an effective yield of 6.74%.**

**INTERSTATE PEST CONTROL COMPACT  
STATEMENT OF CASH FLOWS  
For the fiscal year ended June 30, 2000**

<b><i>Balance on July 1, 1999</i></b>		<b>\$1,001,511.38</b>
<b><u>Add - Inflows</u></b>		
Investment Income:		
LGIP	56,079.97	56,079.97
Dues Income:		
Arkansas	3,954.00	
Florida	6,557.00	
Kansas	4,786.00	
Oklahoma	2,070.00	
Rhode Island	344.00	
Washington	21,426.00	39,137.00
Operating Account Interest		262.79
		<b>95,479.76</b>
<b><u>Deduct-Outflows</u></b>		
Operating Expenses:		
Executive Director	9,759.58	
Bank Service Charges	162.42	
NASDA Conference	425.00	
Printing	339.03	10,686.03
Insurance Claims		
Florida - Research for Tomato Yellow Leaf Curl Virus (TYLCV)	75,167.00	(85,853.03)
<b><i>Balance on June 30, 2000</i></b>		<b>\$1,011,138.11</b>

**INTERSTATE PEST CONTROL COMPACT**  
**STATEMENT OF REVENUES, EXPENDITURES, & CHANGES IN**  
**FUND BALANCES/EQUITY**  
For the fiscal year ended June 30, 2000

***Revenues***

Investment Income	\$56,079.97	
Dues Income	39,137.00	
Operating Account Interest	262.79	
<b>Total revenues</b>	<u>                    </u>	<b>\$95,479.76</b>

***Expenditures***

Operating Expenses	\$10,686.03	
Insurance Claims	75,167.00	
<b>Total expenses</b>	<u>                    </u>	<b>85,853.03</b>

***Excess of revenue over expenditures*** **\$9,626.73**

***Fund balances/equity July 1, 1999*** **1,001,511.38**

***Fund balances/equity June 30, 2000*** **\$1,011,138.11**

**INTERSTATE PEST CONTROL COMPACT  
OPERATING BUDGET  
July 1, 1999 to June 30, 2000**

<u>Description</u>	<u>Budget 1999-2000</u>	<u>Actual 1999-2000</u>	<u>Budget 1998-1999</u>	<u>Actual 1998-1999</u>
<b>NASDA Contracts</b>				
<b>Administration</b>	\$ 2,000.00	0.00	\$ 2,000.00	\$ 1,000.00
<b>Metterhouse</b>	10,000.00	8,190.00	10,000.00	8,100.00
<b>Travel &amp; Miscellaneous</b>	3,500.00	1,994.58	3,500.00	1,646.58
<b>Printing</b>	500.00	339.03	500.00	444.15
<b>Bond for Treasurer</b>	100.00	0.00	100.00	100.00
<b>Audit</b>	150.00	0.00	150.00	0.00
<b>Postage &amp; Miscellaneous-     Secretary's Office</b>	150.00	0.00	150.00	0.00
<b>Bank Charges</b>	0.00	162.42	0.00	449.28
<b>Technical Committee</b>	0.00	0.00	0.00	0.00
<b>Special Committee</b>	<u>500.00</u>	<u>0.00</u>	<u>500.00</u>	<u>0.00</u>
<b>TOTALS</b>	<b>\$16,900.00</b>	<b>\$10,686.03</b>	<b>\$16,900.00</b>	<b>\$11,740.01</b>

**Interstate Pest Control Compact  
Governing Board**

<u>Date of Election &amp; Term of Office</u>	<u>Chairman</u>	<u>Vice Chairman</u>	<u>Secretary</u>	<u>Treasurer</u>
1968 (a) 1968-69	California Lyng	Michigan Ball	Illinois Larkin	Illinois
Feb 1969 1969-70	Michigan Ball	N. Hampshire Buckley	California Fielder	Illinois Lewis
March 1970 1970-71	N. Hampshire Buckley	Tennessee Moss	California Fielder	Illinois Lewis
March 1971 1971-72	W. Virginia Douglass	Delaware Caulk	California Fielder	Illinois Ropp
Jan 1972 1972	Delaware Caulk	California Fielder	Minnesota Dennistoun	Illinois Ropp
Nov 1972 1972-73	California Christensen	New Jersey Alampi	Minnesota Dennistoun	Illinois Ropp
Sept 1973 1973-74	New Jersey Alampi	Ohio Abercrombie	Minnesota Dennistoun	Illinois Williams
Sept 1974 1974-75	Ohio Abercrombie	S. Carolina Harrelson	Minnesota Dennistoun	Illinois Williams
Oct 1975 1975-76	S. Carolina Harrelson	Ohio Stackhouse	Minnesota Dennistoun	Illinois Williams
Nov 1976 1976-77	Ohio Stackhouse	Virginia Carbaugh	Minnesota Dennistoun	Illinois Block
Sept 1977 1977-78	Virginia Carbaugh	N. Carolina Graham	Minnesota Dennistoun	Illinois Block
Sept 1978 1978-79	Virginia Carbaugh	N. Carolina Graham	Minnesota Dennistoun	Illinois Block
Sept 1979 1979-80	Virginia Carbaugh	N. Carolina Graham	Minnesota Dennistoun	Illinois Block
Nov 1980 1980-81	N. Carolina Graham	California Rominger	Minnesota Dennistoun	Illinois Block
Sept 1981 1981-82	California Rominger	Vermont Dunsmore	Minnesota Dennistoun	Illinois Block
Sept 1982 1982-83	Vermont Dunsmore	Michigan Pridgeon	Minnesota Dennistoun	Illinois Werries
Sept 1983 1983-84	Tennessee Walker	Ohio Locker	Minnesota Dennistoun	Illinois Werries

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<u>Date of Election &amp; Term of Office</u>	<u>Chairman</u>	<u>Vice Chairman</u>	<u>Secretary</u>	<u>Treasurer</u>
Sept 1984 1984-85	Ohio Locker	California Berryhill	Minnesota Dennistoun	Illinois Werries
Oct 1985 1985-86	Oregon Kunzman	Delaware Chandler	Minnesota Dennistoun	Illinois Werries
Sept 1986 1986-87	Delaware Chandler	Georgia Irvin	Minnesota Dennistoun	Illinois Werries
Oct 1987 1987-88	Delaware Chandler	Georgia Irvin	Minnesota Dennistoun	Illinois Werries
Sept 1988 1988-89	Georgia Irvin	Ohio Maurer	Michigan Cardwell	Illinois Werries
Sept 1989 1989-90	Ohio Maurer	Utah Ferry	Michigan Cardwell	Illinois Rundquist
Oct 1990 1990-91	Utah Ferry	Pennsylvania Wolff	Michigan Cardwell	Illinois Rundquist
Sept 1991 1991-92	Pennsylvania Wolff	South Carolina Tindal	Michigan Cardwell	Illinois Doyle
Sept 1992 1992-1993	South Carolina Tindal	West Virginia Douglass	Michigan Cardwell	Illinois Doyle
Sept 1993 1993-1994	Ohio Dailey	West Virginia Douglass	Michigan Cardwell	Illinois Doyle
Sept 1994 1994-1995	West Virginia Douglass	New Jersey Brown	South Carolina Tompkins	Illinois Doyle
Sept 1995 1995-1996	New Jersey Brown	Arizona Kelly	South Carolina Tompkins	Illinois Doyle
Sept 1996 1996-1997	Arizona Kelly	Virginia Courter	South Carolina Tompkins	Illinois Doyle
Sept 1997 1997-1998	Virginia Courter	Maine McLaughlin	South Carolina Tompkins	Illinois Doyle
Sept 1998 1998-1999	Arizona Jones	Maryland Virts	South Carolina Tompkins	Virginia Courter
Sept 1999 1999-2000	Maryland Virts	Minnesota Masso	California Lyons	Virginia Courter

(a) First meeting of the Compact was January 1969. Records indicate that officers had been elected or selected prior to this meeting, as meeting was chaired by Lyng of California.



UNIVERSITY OF  
FLORIDA

REC'D ADM.

MAY 25 2000

Appendix G

Institute of Food And Agricultural Sciences  
Gulf Coast Research & Education Center  
Cooperative Extension Service &  
Agricultural Experiment Station

5007 60<sup>th</sup> St. E  
Bradenton, FL 34203  
(941)751-7636  
or SC 516-0025  
Fax: (941)751-7639

22May00

Ms. Connie Riherd  
Div. of Plant Industry  
P.O. Box 147100  
1911 S. W. 34<sup>th</sup> St.  
Gainesville, FL 32614-7100

Dear Connie,

Enclosed please find the 6 month interim report on our activities funded by the Interstate Pest Control Compact entitled "Development Of Tactics To Reduce Or Eliminate Tomato Yellow Leaf Curl Virus Incidence In Vegetable And Ornamental Transplants". We have had a productive 6 months and I am expecting equally or better results from the next 6 months. Please call if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jane".

Jane E. Polston  
Associate Professor

Enclosures:

**INTERSTATE PEST CONTROL COMPACT****MID-YEAR REPORT – MAY 2000****Evaluation and Development of Tactics to Reduce or Eliminate Infection of Vegetable and Ornamental Transplants By TYLCV-Is and Other Whitefly-Transmitted Geminiviruses**

J. E. Polston and D. J. Schuster  
May 2000

Funding Period: November 1999 to November 2000

**SUMMARY**

In the first 6 months of this project we found several new possibilities for the protection of transplants from transmission of TYLCV-Is. We demonstrated that a Novartis product, Fulfill, provided very good protection to tomato transplants against virus-carrying whiteflies. A single application gave 7 days of protection from large numbers of whiteflies reared on TYLCV-Is infected plants. We developed a method for measuring the ability of a compound to repel whiteflies, and have used it to evaluate 16 compounds. Several were found to have repellency and show promise as possible new approaches to protecting transplants from virus transmission. We have tested several other products for their ability to increase plant resistance to infection, or for their ability to kill whiteflies before transmission can occur. We established a technique to measure transmitted and reflected UV and are using it to measure UV light in enclosures. This will allow us to determine if we need to develop whitefly management approaches which focus on reducing the amount of UV light in transplant enclosures. We have found several new plant hosts of TYLCV-Is that are produced as transplants in Florida.

## **INTRODUCTION**

Whiteflies transmit an ever increasing number of plant viruses, one of which, tomato yellow leaf curl virus, is a known pathogen of several important crops in Florida and the southern U.S. In the 1990's TYLCV-Is appeared in the Western Hemisphere and to spread to new countries both in the Caribbean and in the Mediterranean, at least in part through the distribution of infected transplants. Beyond a few insecticides transplant producers have few means by which to manage whiteflies before they can transmit viruses to the developing transplants.

The goal of these studies is to discover new methods by which whiteflies can be discouraged from transmitting TYLCV-Is to susceptible transplants. In order to be implemented these methods will have to be cost effective and consistent with current practices. In addition some of these approaches may be useful for management of TYLCV-is in the field thereby reducing the number of virus-carrying whiteflies that pass through greenhouses and screenhouses. We expect that a combination of several of these tactics may prove to be the most effective in reducing or essentially eliminating the incidence of TYLCV-Is in transplants.

## **OBJECTIVES**

1. Identify approaches that interfere with whitefly feeding behavior and reduce transmission of TYLCV-Is.
  - A. Evaluate use of UV absorbing screens and plastics
  - B. Evaluate use of chemical repellents
2. Evaluate new approaches for reducing whitefly movement into production houses.
3. Evaluate plant growth promoting rhizobacteria (PGPRs) for protection of plants from infection by TYLCV.
4. Identify which plant species commercially produced in Florida are susceptible to infection by TYLCV.

## **RESULTS TO DATE**

We began work on the objectives in November 1999. We hired three people to work on this project, one full time and two half-time. A visiting scholar (Dr. L. Ortega) participated in the repellency studies described in Objective 1 from January through March 2000. The following is a summary of the results obtained to date.

**Objective 1. Identify approaches that interfere with whitefly feeding behavior and reduce transmission of TYLCV-Is.**

A. UV light has been found recently to be critical to whitefly movement and feeding behavior. In order to study this in more depth and use this in whitefly/virus management, we have purchased a UV/VIS portable spectrophotometer and computer. We are using this to measure the amount of UV that passes through or is reflected by various agricultural plastics and screens. We have begun evaluating the presence of UV in greenhouses at the GCREC to determine how UV light between the wavelengths of 350 and 425 nm is distributed in various types of greenhouses. We will use this information to develop a sampling design that will use to measure the amount of UV light that exists in commercial greenhouses and screenhouses. Once we have determined if and where UV light is distributed we can then make decisions regarding approaches that can be taken to decrease the amount of UV light in order to interfere with whitefly movement. We will plan to test various materials for their ability to block UV light.

B. After evaluating several methods, we developed a laboratory bioassay method to evaluate and compare various commercial products and chemical compounds for repellency to silverleaf whitefly adults. The bioassay chamber in which repellency is measured is shown in **Figure 1**. Whitefly adults are collected and placed in the chamber where they have access to the test material and a water control that have been applied to the surface of a disk cut from a tomato leaf. After the adults have been in the cylinders for 24 hrs, the number of whiteflies on the leaf disks are counted. At least five concentrations (% v/v) of each test product or compound are evaluated along with a water check in at least four of the replications. The data were converted to the number of adults not on the leaf disks and the data were subjected to probit analyses using SAS. Rates of repellency ( $RC_{50}$ ) were calculated based on a standard, Sunspray Ultrafine Oil, that is a commercial product believed to repel whiteflies from leaf surfaces.

Sixteen products have been tested to date and the results are shown in **Table 1**. The commercial products Bio Crack (garlic extract), Organocide (sesame and fish oils) and Pepper Wax (capsacin) that are sold as having repellent properties for agricultural insect pests were not as repellent to the silverleaf whitefly as the Sunspray Ultrafine Oil standard. Of the other products evaluated, only citronella, ginger oil, hamlin oil (citrus oil), olive oil and winter green oil had higher repellent properties than did Sunspray; however, the  $RC_{50}$  values were not greatly lower than Sunspray. All of the non-commercial components were formulated with 1% Tween 20 in order to make water preparations. It is possible that the

formulations of these components could be modified to improve their repellent properties.

We plan to continue our evaluation with other compounds. We also plan to test the compounds that demonstrated repellency for their ability to interfere with the transmission of TYLCV-Is.

***Objective 2. Evaluate new approaches for reducing whitefly movement into production houses.***

We will begin work on this objective once we know the status of UV light in commercial greenhouse/screenhouse enclosures.

***Objective 3. Evaluate plant growth promoting rhizobacteria (PGPRs) for protection of plants from infection by TYLCV-Is.***

**PGPRs.** We received 9 commercially available PGPR strains from Gustafson for evaluation. Four of these strains (LS247, LS265, LS266, and LS267) have been evaluated and none had any effect on the transmission of TYLCV-Is to tomato transplants. We will continue to screen the remaining five for their ability to increase plant resistance to infection by TYLCV-Is.

**Actigard.** Actigard (a Novartis product), was applied as a soil drench and was evaluated for its ability to protect plants from infection in two experiments. At the initial rates tested (0.07 and 0.04 g ai/L of a 50WP formulation) Actigard was observed in both experiments to increase TYLCV-Is infection rates. We have also evaluated Actigard at 3 rates (0.0262 g/L, 0.0092 g/L, and 0.0046 g/L) in a foliar application and it was found to have no effect on transmission rates. We are now testing 6 rates of Actigard in a soil drench application.

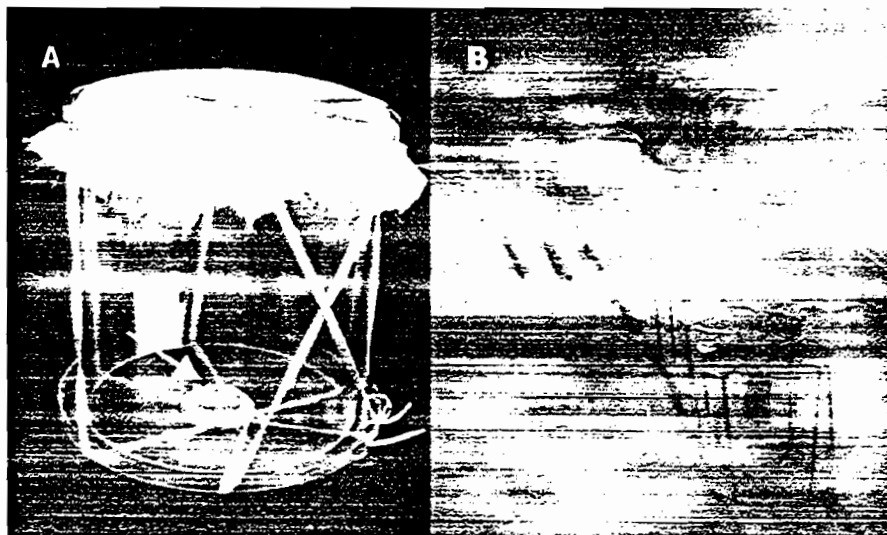
**Other Chemicals.** Actara (from Novartis, with a chemistry similar to imidacloprid, the chemical that provides the best chemical control of whiteflies), and Fulfill (developed as an aphid anti-feedant) were evaluated for their ability to interfere with whitefly transmission of TYLCV-Is. **Actara** worked well, as expected, and performed in a similar manner to imidacloprid. However, Actara will have limited usefulness because of its chemical similarity to imidacloprid and the concern of whitefly resistance to imidacloprid. **Fulfill** was demonstrated to have a significant impact on whiteflies and the transmission of TYLCV-Is. We found that at the label rate (0.291g/L Fulfill 50WG plus 2.5 ml/L NIS), Fulfill provided protection for 4 days. However, Fulfill provided protection from virus transmission for 7 days at a higher rate (0.582g/L Fulfill 50WG plus 2.5 ml/L NIS). Fulfill has a different chemistry than other insecticides in current use and could be very helpful in management of whiteflies and geminiviruses in

transplants. We are working with Novartis to have the label for Fulfill amended to include use in enclosures. Currently the label prohibits such use.

**Objective 4. Identify which plant species commercially produced in Florida are susceptible to infection by TYLCV-Is.**

Since November 1999 we have evaluated more than 35 species of ornamentals, vegetables, fiber crops, and weeds for a total of 71 species inoculated with TYLCV-Is. We have found 11 hosts not including tomato. Under the funding of this project we have evaluated 35 species, and from those have identified the following never-before-reported hosts of TYLCV-Is: *Limonium sinuatum* (statice), an ornamental plant, *Solanum capsicoides* (red tropical soda apple), and *Arabidopsis thaliana*, a plant used extensively in studies of plant molecular biology. In addition to those new hosts, previously we identified the following as new hosts: *Petunia hybrida* (petunia) an ornamental plant, and *Physalis ixocarpa* (tomatillo) and *Physalis pruinosa* (groundcherry), both grown as vegetables. Florida is the third largest producer of petunias in the U.S. and produces lesser numbers of transplants of statice and tomatillo.

We will continue to evaluate ornamental, vegetable, and weed species for their susceptibility to TYLCV-Is and have at least 50 more species selected for testing.



**Figure 1.** A laboratory bioassay to measure the ability of a compound to repel adult whiteflies. **A.** Cage (shown upside down) designed to confine whitefly with leaf disk that has been treated with test compound. Leaf disk indicated by arrow. **B.** Experiment in progress showing cages in correct orientation with whiteflies.

**Table 1.** Comparison of various compounds for repellency to whitefly adults

Material	Intercept	Slope	RC <sub>50</sub> <sup>1</sup>	RR <sub>50</sub> <sup>2</sup>	P
Sunspray Ultrafine Oil <sup>7</sup>	1.39	1.77	0.15	—	<0.01
Bio Crack <sup>7</sup>	-3.03	1.68	63.67	424.5	0.50
Capsacin			>0.1 <sup>3</sup>		
Castor Oil	0.41	1.28	0.48	3.2	<0.01
Cineole	0.32	0.95	0.46	3.1	0.02
<b>Citronellal</b>	<b>2.79</b>	<b>2.67</b>	<b>0.09</b>	<b>0.6</b>	<b>0.33</b>
<b>Geranium Oil</b>	<b>1.60</b>	<b>1.76</b>	<b>0.12</b>	<b>0.8</b>	<b>0.01</b>
<b>Ginger Oil</b>	<b>3.92</b>	<b>3.26</b>	<b>0.06</b>	<b>0.4</b>	<b>0.05</b>
<b>Hamlin Oil</b>	<b>0.80</b>	<b>0.64</b>	<b>0.06</b>	<b>0.4</b>	<b>0.04</b>
<b>Limonene</b>	<b>2.36</b>	<b>3.59</b>	<b>0.22</b>	<b>1.5</b>	<b>&lt;0.01</b>
<b>Olive Oil</b>	<b>2.38</b>	<b>1.49</b>	<b>0.025</b>	<b>0.2</b>	<b>0.002</b>
Organocide (New) <sup>7</sup>	-0.78	3.83	1.60	10.7	0.07
Organocide (Old) <sup>7</sup>	-0.29	2.07	1.39	9.3	0.12
Pepper Wax <sup>7</sup>	-9.29	7.01	21.13	140.7	0.001
Tween 20	-1.73	1.53	13.45	89.7	0.36
Winter Green Oil	3.08	2.77	0.08	0.5	<0.01

<sup>1</sup>Estimated concentration of test compound (% v/v) required to repel 50% of an adult whitefly population.

<sup>2</sup>Repellency rates based upon RC<sub>50</sub> values relative to Sunspray Ultrafine Oil standard.

<sup>3</sup>Higher concentrations were too innocuous to handle. Compounds of interest are highlighted in bold.



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# Oregon

John A. Kitzhaber, M.D., Governor

Appendix H

Department of Agriculture

635 Capitol Street NE  
Salem, OR 97301-2532



April 10, 2000

William W. Metterhouse  
Executive Director  
Interstate Pest Control Compact  
c/o National Associations of State Departments of Agriculture  
1156 15th Street NW, Suite 1020  
Washington D.C. 20005

Dear Mr. Metterhouse:

Please find enclosed our grant application to the Interstate Pest Control Compact requesting financial assistance. These grant funds would be used to assist in maintaining a quarantine, conducting a delimiting survey and taking steps towards control of the federal listed noxious weed, small (clover) broom rape, *Orobanche minor*. We believe that it is essential to take aggressive control and containment actions to protect both Oregon's and other states valuable agricultural resources.

We would like to thank both the Interstate Pest Control Compact, Technical Advisory Committee and the Governing Board for their consideration of this grant proposal.

If you have any questions or require any further information, please contact either Tim Butler or myself.

Sincerely,

Daniel J. Hilburn  
Administrator  
Plant Division  
(503) 986-4644  
FAX: (503) 986-4786

Encl.



## INTERSTATE PEST CONTROL COMPACT REQUEST FOR FINANCIAL ASSISTANCE FROM THE PEST CONTROL INSURANCE FUND

### PART I

1. Requesting state: Oregon  
 Compact administrator: Daniel J. Hilburn  
Oregon Department of Agriculture  
Salem OR 97301-2532 503-986-4663

2. Responding state(s):

State	Program Administrator or Responsible Official	Compact Member Yes or No	Is State In Agreement with Application? Yes or No
1. Utah	Stephen T. Burningham	Yes	Yes
2. California	Nathan Dechoretz	Yes	Yes
3.			
4.			

3. Pest Involved:

- A. Common and scientific names: small broomrape, clover broomrape, *Orobanche minor*
- B. Is pest native or introduced from outside the continental U.S.? Introduced from the Middle East and North Africa.
- C. Major means of dispersal or transmission: Contamination of seed crops is the major method of long distance dispersal. Thousands of fine dust-like seeds are produced by each plant. Short distance dispersal can occur via wind, water or dirty equipment.
- D. Known geographical range in U.S.: Herbarium records indicate that *O. minor* has been recorded from thirteen states. Georgia, South Carolina and North Carolina have ongoing eradication program.
- E. Potential geographical range in U.S.: Historical records indicate this plant has been found in scattered small infestations from New York to Florida on the East coast and in Oregon and Washington. A similar situation existed in New Zealand for about 70 years before the weed became widespread and economically important.

F. Type of damage caused by pest: Small broomrape is a parasitic plant. It attaches to the roots of clovers and other hosts. Heavy infestations can result in reduced yields up to total crop loss. Quarantines can disrupt market access. About two dozen countries regulate Orobanche spp.

4. Economic impacts:

Crops Affected (List) 1998 Figures	Acreage and Value					
	Requesting State (Name) OREGON		Responding States			
			State #1 (Name) UTAH		State #2 (Name) CALIFORNIA	
	Acres	Value	Acres	Value	Acres	Value
1. Red Clover Seed	7,800	\$8,636,000				
2. Crimson Clover Seed	3,680	\$3,684,000				
3. Alfalfa	(Seed) 9,167	7,963,000	(Hay) 545,000	189,442,000	(Seed) 45,993	40,013,910
4. Many other crops could be impacted indirectly by quarantines.						

B. Value of crop(s) to United States: \$28,000,000 Clover; \$353,472,000 Sunflower; \$2,329,397,000 tobacco

C. Estimated potential damage to crop(s) in requesting state if compact not invoked: A worse case scenario would be that clover seed production in Oregon would become non-economical due to quarantines imposed by states and countries which import the seeds. This would be a \$14 million annual loss.

D. Other states which may be adversely impacted: Any states that grows clover, alfalfa, other legumes, carrots, tobacco, or other hosts could be impacted.

5. Type of program (i.e., quarantine, eradication, suppression, delimiting survey, etc.): Quarantine delimiting survey, and eradication.

6. Will compact implementation result in an increase or decrease in normal plant pest control activity in the requesting state?: Increase  
If a decrease result, explain how and why: \_\_\_\_\_

7. Amount of funds requested: \$20,000

A. Will state funds supplement this?: Yes

If yes, how much? \$10,000

B. Will federal funds also be used?: Yes

If yes, how much? \$10,000

8. To the best of your knowledge, can the conditions which initiated this application for funds be abated, by a program undertaken with these funds, in one year or less?: Yes, unless the delimiting survey uncovers additional infested sites.

If not, is this request for an installment in a program which is likely to continue for a longer period of time?: Hopefully not!

9. Target date from program implementation: April 2000  
Target date for completion: September 2000

PART II

10. Detail exactly what work will be performed and what will be accomplished with the funding request from the Insurance Fund. **Action Plan and internal quarantine attached.**
11. Attach a detailed statement of the circumstances which occasion this request for the invoking of the compact. Include information on how and why the situation is serious, whether or not an emergency exists, and the reasons why financial assistance is needed. **See Action Plan.**
12. Attach an itemized budget page showing how the requested money will be spent as well as any state or federal funds as listed in item 7 above. **See Action Plan page 7.**
13. If the requested insurance fund money is to be used by a non-party (non-member) state, attach a statement justifying why conditions in the non-party state warrant financial assistance, and explain the value of such expenditures to the party (member) states as a whole.
14. Attach a statement of the extent of the present and projected program of the requesting state, including full information as to legal authority for the conduct of such program and the expenditures being made or budgeted therefore, in connection with the eradication, control, or prevention of introduction of the pest concerned.
15. Application submitted by: Daniel J. Hilburn  
Administrator, Plant Division  
Oregon Department of Agriculture  
635 Capitol St NE  
Salem, OR 97301-2532 503-986-4663

The following person in the requesting state can be contacted for further program details:

Name: Tim Butler  
Title: Noxious Weed Program Supervisor  
Address: Oregon Department of Agriculture  
635 Capitol St NE Salem, OR 97301-2532  
Phone: 503-986-4621

The following person in the responding state(s) can be contacted for further program details:

State #1:

Name: Stephen T. Bruningham  
Title: State Weed Specialist  
Address: State of Utah, Department of Agriculture  
PO Box 146500  
Salt Lake City, UT 84114-6500  
Phone: 801-538-7100

State #2:

Name: Nathan Dechoretz  
Title: Program Supervisor  
Address: State of California, Department of Agriculture  
1120 N St Rm A-357  
Sacramento, CA 95814  
Phone: 916-654-0768

# Small Broomrape

## *Orobanche minor*



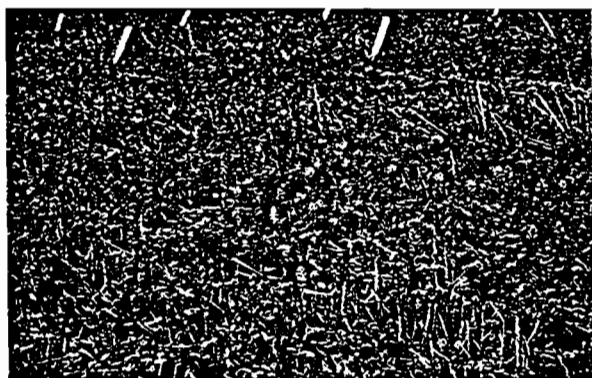
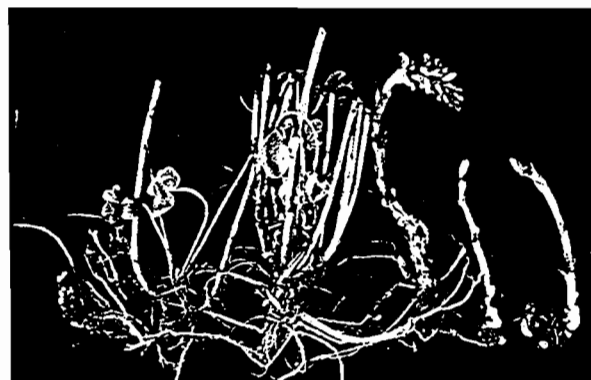
### Introduction to Small Broomrape:

This plant has been found in Clackamas County Oregon. *Orobanche minor*, an introduced exotic plant poses a potential threat to economically important crops such as clover and other legumes. Heavy infestations can cause total crop failure. Small broomrape is a parasitic weed that attaches to the roots of other plants for nutrients and water.

### Description of the Weed:

Small broomrape, has wide host range, although some researchers contend that serious economic damage is restricted mainly to clovers (*Trifolium spp.*).

A native of the Middle East and North Africa, the leafless stem is yellowish-brown, often with a purple tinge, and up to 20" tall. The flowers are off-white to yellowish with violet markings, and produce numerous dust-size seeds. The seeds can remain viable in the ground for up to fifteen years.

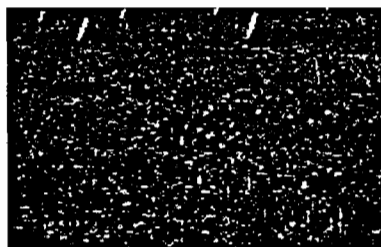


### Who to Contact:

If you think you have this weed contact :

Oregon Department of Agriculture  
Noxious Weed Control Program  
503-986-4621

## Small Broomrape *Orobanche minor*



### Action Items:

**1. Action Plan for 2000: Timeline: February to July 2000.**

- \* ODA has worked with USDA, OSU and the Clover Commission to identify options and develop an action plan for 2000. Elements of the plan include a narrow quarantine, requiring planting of non-host plants in 3 infested fields, a spring survey and continued education.

**2. Funding: Timeline: March 2000.**

- \* Develop a funding proposal for the Interstate Pest Control Compact. This funding proposal would also include funding contributions from Oregon Clover Commission (?), USDA- APHIS, and ODA. These funds will be used for compensation of the grower, monitoring of quarantined fields, and survey for additional broomrape sites.

**3. Quarantine of infested fields: Timeline: February 2000.**

- \* Include only three fields that are known to be infested in Aurora, Oregon.
- \* Allow the grower to plant non-host crops in the spring of 2000.
- \* The Quarantine will be reviewed after a survey this spring. If the weed is widespread, the quarantine will be dropped.

**4. Continued outreach and education of growers and fieldmen: Timeline: Ongoing.**

- \* This will include how to identify small broomrape and procedures to follow if it is detected.

**5. Intensive survey and detection efforts: Timeline: May and June 2000.**

Survey Mitigation Measures:

- \* ODA plans to conduct a survey for small broomrape in the spring of 2000. Grower cooperation is essential. No control actions will be taken until the survey is complete, grower and industry representatives have been consulted, and the statewide situation reviewed. If small scattered infestations are detected in crop fields during the survey the small broomrape can be removed and bagged to prevent any seed loss. If detected in a seed crop all seed harvested from the fields would be tested for small broomrape to ensure purity.

**6. Development of long term management strategies: Timeline: July and August 2000.**

- \* After results of the survey are known, a long term management strategy will be developed. The Ag industry will be consulted. ODA will welcome input from the industry to discuss adoption of any future management of small broomrape.

# **Small Broomrape** *(Orobanche minor)*

## **Action Plan**

**Oregon, 2000**

**Dan Hilburn, Administrator Plant Division**  
**Tim Butler, Noxious Weed Control Program Supervisor**

Oregon Department of Agriculture  
635 Capitol St. NE  
Salem, OR 97301

**Gary Carpenter, State Plant Health Director**

U.S. Dept. of Agriculture, APHIS, PPQ  
6135 NE 80th Ave., Suite A-5  
Portland, OR 97218-4033

**February 11, 2000**

## Small Broomrape Action Plan, Oregon, 2000

**NAME:** *Oribanche minor* Smith (commonly known as small broomrape)

### BACKGROUND:

Small broomrape is a parasitic weed that attaches to the roots of other plants. It is native to the Middle East and North Africa. Several infestations are known from states in the Southeast; Georgia and North Carolina have active eradication programs. There are six historical reports of small broomrape in Oregon dating back to 1923; all are from Multnomah or Clackamas County. One of these records was from a carrot field, the rest are known to be or thought to be from non-crop situations. None of these infestations are known to have resulted in sustained populations.

In 1999, small broomrape was discovered in a red clover seed field near Aurora (Clackamas Co.). A quick survey of nine other clover fields in the area, including some planted with seed from the same source, did not find any additional small broomrape plants. Several experienced farm experts that saw the weed, report that they have never encountered it in other fields. At this point, it appears that the infestation is confined to a single farm. The farmer reports seeing this weed on his farm in the 1970's, but not in the years since until the late 1990s. Two adjacent fields totaling 40 acres were infested in 1999. A nearby field planted in barley in 1999 had small broomrape in it in 1998 when it was planted in clover.

### IMPORTANCE:

Small broomrape is a federally listed noxious weed that is of quarantine significance to many of our trading partners. Among the approximately 26 countries that have regulations restricting *Orobancha* spp are: Argentina, Australia, Canada, China, Columbia, Hungary, India, Indonesia, Mexico, Poland, Romania, Saudi Arabia, South Africa, and Uruguay.

The regulations from these countries do not specify that the area of origin be free from *Orobancha*, ~~only that the crop be free from *Orobancha* seeds.~~ One country requires a field inspection. If small broomrape establishes a permanent population in Oregon, some markets for Oregon agricultural products could be expected to require testing for *Orobancha* seed contamination.

There is evidence that the regular seed cleaning process cleans out the majority of contaminating *Orobancha* seeds, but cannot be counted on to remove 100% of broomrape seeds from red clover seed crops. This may apply to other seed crops as well. Small broomrape seeds are tiny (dust-like). They stick to the sides of plastic bags and petri dishes, apparently because of "static cling".

Direct crop yield losses from small broomrape in Oregon would probably be limited to clover. In New Zealand, this weed was considered to be of minor importance from its introduction in 1868 until 1955 when serious pathological

effects became noticeable. The damage observed in 1998 and 1999 in Clackamas Co. varied widely within the fields. In some areas, the clover seed crop was apparently unaffected by a light infestation. In other areas, the crop was almost completely wiped out by the weed.

There is no way to predict with accuracy whether the direct impact of small broomrape on clover and other host crops in Oregon would be insignificant or dramatic. Both scenarios are possible.

#### **BIOLOGY:**

Small broomrape stems are yellowish brown and leafless. The plant is an obligate parasite that lacks chlorophyll. Stems grow up to 22" tall. Underground they attach to the roots of host plants and hijack their water and nutrients. Flowers are small and snapdragon-like. Each produces hundreds of minute black seeds, that to the naked eye, resemble dust or soot.

Small broomrape has many hosts. Serious economic damage is restricted mainly to clovers (*Trifolium* spp), but other legumes, and some composites can support the parasite. In Georgia, catsear (*Hypochaeris* spp), vetch (*Vicia* spp), and several other roadside plants are common hosts. Carrots, sunflower and tobacco are hosts in other countries. Small broomrape seeds germinate only when stimulated by chemicals given off by nearby host plants. The seeds can remain viable in the soil for 15 years.

#### **LIST OF COOPERATORS:**

Oregon Department of Agriculture  
U.S. Department of Agriculture  
Interstate Pest Control Compact  
Oregon State University  
Oregon Clover Commission

#### **PROPOSED ACTIONS:**

##### **1.) Trace Backs and Trace Forwards**

Several fields planted with seed from the same source as the infested fields were identified shortly after the infestation came to light. These fields were surveyed in September 1999; all were negative. There are plans to resurvey them in 2000.

Some of the clover seed produced from the infested fields in 1998 has been traced to warehouses in Oregon and Texas. Tests on one lot of seeds in Oregon at eight times the usual sample rate failed to detect any *Orobanche* contamination. Tests on the lot in Texas were also negative. However, a 200 gram file sample of certified seed from a second lot contained two *Orobanche* seeds.

## **2.) Survey**

Nine red clover fields, including some planted with seed from the same source as the infested fields were examined in September 1999. Small broomrape was not found in any of these fields.

Current plans are to survey 100 fields in June 2000, including as many as possible that have a connection to the infested fields. It is estimated that a person can survey an average of four fields a day.

If the survey does not detect any additional infested sites or the number of new sites is small enough that eradication is still feasible, the proposed eradication program should proceed as outlined below. On the other hand, if small broomrape is found established in a larger area, a different plan may be called for. In that case, a control area should be considered. Deregulation would also be an option.

## **3.) Education**

ODA has convened two public meetings, one on Sept. 10<sup>th</sup>, the other on Feb. 3<sup>rd</sup> to discuss options for dealing with this weed. Experts and interested parties from USDA, OSU, the Clover Commission, and the community attended. There was a consensus that a delimitation survey was critical and an attempt to eradicate was justified if the infestation is confined to a small area. Additional meetings will be necessary and education should be stressed.

Extension Agents, Seed Certification Field Inspectors, Scouts, Farmers and other people who regularly enter fields of clover should be trained to recognize small broomrape. ODA staff presented an educational program to about 80 clover growers on Feb. 9<sup>th</sup>. USDA is developing a brochure with pictures.

## **4.) Quarantine or Other Regulatory Action**

An emergency quarantine was enacted on September 13, 1999. This quarantine prohibited harvesting the clover seed crop from the infested fields and required sanitizing equipment used on the fields. A replacement quarantine modifying and extending the provisions of the emergency quarantine has been drafted and will be filed in mid-February.

## **5.) State/Federal Noxious Weed List Coordination**

Valuable time was lost in identifying this weed, determining which agency, USDA or ODA, had jurisdiction, and deciding how the agencies should coordinate their activities. Small broomrape is on the federal noxious weed list, but not on Oregon's noxious weed list. In this case, USDA was unable to take action at the field level because interstate commerce was not involved. ODA's authority was limited because the weed was not listed in Oregon's noxious weed quarantine and Oregon's noxious weed law empowers counties to enforce weed regulations, but the county involved did not have an active noxious weed control program.

ODA is initiating a comprehensive review of noxious weed control programs in the State. This issue of coordination between federal and state noxious weed programs and apparent gaps in authority will be addressed.

#### 6.) Eradication

The public meetings have included discussions of the options for dealing with this weed. Experts and interested parties from USDA, OSU, the Clover Commission, and the community attended both meetings. Eradication was one of the options identified. Four possible ways (A, B, C, & D below) have been identified to achieve this goal:

A.) Dr. Bob Eppley, a USDA *Orobanche* expert, was brought to Oregon in September, 1999, to advise regulatory officials on a strategy for dealing with the current infestation. The following actions are based on his recommendations:

i.) Burn the existing crop with a propane flamer. This was completed in late September, 1999.

ii.) Fumigate the infested ground with methyl bromide. The ground needs to be worked deeply before fumigation. Erosion concerns preclude this from being done before the winter rains. In addition, soil temperature and moisture conditions will not be optimal for fumigation until June/July 2000.

iii.) Bioassay by replanting red clover and monitoring for small broomrape plants. If small broomrape continues to show up in the field, additional treatments may be necessary. Small, infested spots could be treated with herbicides before seed set of the weed. Fumigation could be repeated on any parts of the fields where the infestation persisted. During the bioassay period, the clover seed crops would be marketable if surveys and seed samples were negative for presence of the weed. Positive surveys/seed samples would probably result in destruction of the crop. After two years of negative data, eradication would be declared successful.

B.) Alternatively, non-host plants could be planted in these fields for the next fifteen years or until a bioassay with a susceptible host indicated that the seed bank was exhausted.

C.) Another alternative would be to allow clover to be grown on the land, but require that the crop be sprayed with an herbicide (destroying both the weed and the host plant) wherever and whenever small broomrape appears. No selective herbicides are known that would kill the weed but not the clover. Theoretically, this action should deplete the seed bank more quickly than the non-hosts option. However, there is a high probability that no commercial crop could be harvested from the field for several years.

D.) A fourth alternative may be to convert the land to non-farm uses. There is interest in converting farmland in the area to housing developments.

## TIMING AND ESTIMATED COSTS

Outlined below are the options and estimated costs for completing this project. The estimates are preliminary and designed to give officials a "ballpark" for planning purposes.

### 1.) Survey

Timing: May/June 2000

Cost: 100 fields at 4/day/person + mileage = \$11,224

### 2.) Fumigation

Timing: June/July 2000

Cost: 60 acres (40 in clover in '99 + 20 in barley in '99) x \$2,000/ac = \$120,000

### 3.) Compensation

Burning the weed and seeds on the soil surface also destroyed the clover seed crop. In cases like this, cooperation of growers is essential for timely detection and successful eradication. Compensation for the loss of a crop is essential to insuring cooperation. The value of the material destroyed depends on the price of the commodity, which fluctuates. In addition, estimates of the potential yield from an unharvested field can not be done with precision. Last year red clover seed sold for about \$1.15/lb, at this time the price is about \$.80/lb.

Timing: ASAP

Cost: Low Estimate [(700 lbs/ac x 15 ac) + (600 lbs/ac x 18ac) + (75 lbs/ac x 7ac)] x \$.80/lb = \$17,460

High Estimate [(800 lbs/ac x 15 ac) + (700 lbs/ac x 18ac) + (100 lbs/ac x 7ac)] x \$1.15/lb = \$29,095

Average=\$23,278

### 4.) Sanitation

Sanitizing equipment entering and leaving the field should help limit the spread of seeds. Quatranary ammonia solutions have been shown to be effective at killing the seeds.

Timing: Continue until the risk of moving broomrape seeds is insignificant.

Cost: 1 gal/yr @ \$25/gal

### 5.) Non Hosts

Small broomrape seeds only germinate in the presence of legumes, some composites and other suitable hosts. If infested fields are planted in only nonhosts, such as grass/grains, the level of viable broomrape seed should decline over time. Some seed could remain viable for at least fifteen years.

Timing: fifteen years

Cost: Several other crops should be roughly comparable in value to red clover seed.

## 6.) Herbicides

Treating with a non-selective herbicide every time small broomrape appeared would cost about \$35/acre for each application. A conservative guess is that such a program might require three treatments per year for three years. Under this option the clover crops would not be salable. ODA would probably need to rent the land.

Timing: three years ?

Cost: \$2100/application, 3 applications/yr for 3 years = \$18,900

Land Rental: \$9,000/yr for 3 yrs = \$27,000

## 7.) Non-Farm Uses

The site of the current infestation is zoned for exclusive farm use. A representative of the Clackamas Town Planning Commission attended the Feb. 3<sup>rd</sup> public meeting. He indicated that it is very unlikely that the zoning will be changed in the near future.

## RECOMENDATIONS

### 1.) Burn plants and seeds on the soil surface -- Complete

2A.) Fumigate infested fields with methyl bromide (June/July 2000)  
Plant fields with red clover in fall 2000 and monitor (**bioassay**) carefully in 2001 and 2002. Treat any infested areas with an herbicide before small broomrape seed production. If small broomrape continues to show up in the field, repeat one or both of the steps above although perhaps on only parts of the fields. After two years of negative data, eradication would be declared successful. During the bioassay period, the clover seed crops would be marketable if surveys and seed samples were negative. Positive surveys and/or seed samples would likely result in the crop(s) being destroyed.

OR

2B.) Plant **non-hosts** for fifteen years or until small broomrape no longer shows up when susceptible hosts are planted. **\*\*\*This is the preferred option.\*\*\*** It is relatively inexpensive and it preserves the opportunity to switch to another strategy if the delimitation survey finds additional sites, if new control methods are developed in the future, or if additional resources become available.

OR

2C.) Allow clover to be grown on the land, but require that the crop be sprayed with an herbicide (destroying both the weed and the host plant) wherever and whenever small broomrape appears.

OR

2D.) Convert the land to **non-farm** uses, e.g. houses. During construction precautions would have to be taken insure that soil was not removed from the site.

3.) If future surveys detect additional sites, a control area may be appropriate. Infested fields within the area could be restricted to non-host plants or require herbicide treatments or fumigation and bioassay as outlined above. Deregulation should be considered if a point is reached where regulatory action can no longer be expected to slow the spread of the weed or it is determined that the weed is not a significant threat to crop yields or markets.

### ESTIMATED BUDGETS

	No Action	Fumigation	Non-Hosts**	Herbicide	Non-Farm
Propane burn*	\$3,200	\$3,200	\$3,200	\$3,200	\$3,200
Sanitizing *	\$100	\$100	\$100	\$100	\$100
Staff Time*	\$2,639	\$2,639	\$2,639	\$2,639	\$2,639
Compensation					
high	\$29,095	\$58,190	\$29,095	\$29,095	\$29,095
low	\$17,460	\$34,920	\$17,460	\$17,460	\$17,460
average	\$23,278	\$46,555	\$23,278	\$23,278	\$23,278
Survey		\$11,224	\$11,224	\$11,224	\$11,224
Fumigation		\$120,000			
Rent, 3yrs				\$27,000	
Herbicide 9X				\$18,900	
<b>TOTAL</b>					
high	\$35,034.00	\$195,353.00	\$46,258.00	\$92,158.00	\$46,258.00
low	\$23,399.00	\$172,083.00	\$34,623.00	\$80,523.00	\$34,623.00
average	\$29,217.00	\$183,718.00	\$40,441.00	\$86,341.00	\$40,441.00

\*These items have already been paid for out of ODA's Noxious Weed Control budget.

\*\*Preferred Option.

### POTENTIAL FUNDING SOURCES

- 8.) ODA's noxious weed control program has run a deficit for the past several years. This program cannot contribute more cash, but it is able to provide staff time of people who are well trained in surveys and small eradication programs.
- 9.) The Interstate Pest Control Compact is an insurance fund for pest emergencies. Oregon is a member. Conversations with the Director indicate our chances of getting matching funds for eradication costs would be good.
- 10.) E-board. The legislative E-board might be willing to provide some funds. This is an unknown and should be used as a last resort.

- 11.) USDA may be able to provide limited funds. The chances of obtaining federal funds improve if the project is a cooperative one with other partners.
- 12.) The Clover Commission may be able to make a modest contribution.
- 13.) Farmer. When livestock is destroyed due to the threat of disease, the current law allows ODA to compensate ranchers at the rate of 80% of market value. Twenty percent of the loss is borne by the rancher. This may be a useful model to use in this instance.

#### PROPOSED FUNDING PACKAGE

The preferred option, planting non-hosts, is relatively inexpensive, about \$40,000. A possible cost share for this program might be:

ODA = 1/4

USDA = 1/4

IPCC = 2/5

Clover Commission = 1/10

Farmer = costs of switching to a different crop, 20% cost of destroyed crop

603-052-1025

**Quarantine; Small Broomrape**

(1) Establishing Quarantine. A quarantine is established restricting future crops in fields infested with small broomrape (*Orobanche minor*), and requiring inspection of farm equipment that exits the fields. This quarantine is established under ORS 561.510 to protect Oregon's agricultural industries from the artificial spread of small broomrape.

(2) Area under Quarantine: Three fields at 25600 Eiler's Rd., Aurora, Oregon (T3S R1E section 19, tax lots 00600 and 00500, and T3S R1W section 24, tax lot 02900).

(3) Commodities Covered: Small broomrape plants including seeds, and soil, commodities and equipment that may be contaminated with small broomrape seeds.

(4) Provisions of the Quarantine: Growing or harvesting clover or other host plants in the area under quarantine is prohibited for fifteen years from the date the fields are put under quarantine unless:

(a) the fields are fumigated with methyl bromide and demonstrated to be free of small broomrape by a bioassay consisting of two years of no sightings of small broomrape with a susceptible host crop in the fields, or

(b) the fields are sprayed with an herbicide that completely kills all small broomrape plants before they flower each time they appear until the fields are demonstrated to be free of small broomrape by a bioassay consisting of two years of no sightings of small broomrape with a susceptible host crop in the fields, or

(c) the fields are treated in some other way approved by the Oregon Department of Agriculture.

Equipment exiting an infested field must be inspected by the operator for clumps of soil adhering to the tires or other parts of the equipment. Clumps of soil must be removed by pressure washing or other means approved by the Oregon Department of Agriculture.

(5) Research plots in the area under quarantine, planted with clover or other host plants, may be approved by the Oregon Department of Agriculture for the purpose of developing new control methods. Requests to conduct research shall be in writing and permission to conduct research and any required conditions will be provided by the Department in writing.

(6) Violation of this quarantine may result in a fine, if convicted, of not less than \$500 nor more than \$5,000, as provided by ORS 561.990 (4). Commodities harvested or shipped in violation of this quarantine shall be treated or destroyed without expense or indemnity paid by the State.

DEPARTMENT OF FOOD AND AGRICULTURE



February 25, 2000

IPPC C/O ODA

Tim V. Butler  
Field Operations Manager  
Oregon Department of Agriculture  
Noxious Weed Control Program  
635 Capitol St. N.E.  
Salem, Oregon 97301-2532

Dear Tim,

The California Department of Food and Agriculture strongly supports your efforts to eradicate small broomrape (*orabanche minor*). Since this parasitic plant has not been reported in California and it is now known to be a problem to agriculture due to your infestation, we fully support your efforts at eradication. It is very fortunate that you detected this plant before a large number of acres were involved. Your chances of eradication are good under this condition.

Sincerely,

*Ross O'Connell for Nate Dechoretz*

Nathan Dechoretz  
Program Supervisor  
California Department of Food and Agriculture  
Plant Health and Pest Prevention Services  
Integrated Pest Control Branch

cc: R. Roberson



# State of Utah

## DEPARTMENT OF AGRICULTURE & FOOD

**Michael O. Leavitt**  
Governor  
**Cary G. Peterson**  
Commissioner  
**Van Burgess**  
Deputy Commissioner

350 North Redwood Road  
P.O. Box 146500  
Salt Lake City, Utah 84114-6500  
(801) 538-7100  
(801) 538-7126 FAX

March 6, 2000

Interstate Pest Control Compact (IPCC)  
C/O Oregon Department of Agriculture  
Noxious Weed Control Program  
635 Capitol St. N.E.  
Salem, OR 97301-2532

To Whom It May Concern;

I fully support the grant request for funding to control small broomrape, Orobanche minor, as currently requested by the Oregon Department of Agriculture.

Small broomrape is a Federally listed parasitic noxious weed that is a serious noxious weed in legume crops. It comes from the Middle East and North Africa and to my knowledge is not found in Utah. Because legume crops are a major product of Utah, I support the control of small broomrape and the prevention of movement of small broomrape in agricultural commodities such as agricultural seed.

Sincerely,

A handwritten signature in cursive script that reads "Stephen T. Burningham".

Stephen T. Burningham  
State Weed Specialist