IR-4 Provides Economic Viability

The specialty food crop value in New Jersey is $846 million. Specialty crops include most vegetables, fruits, nuts, herbs, nursery and flower crops. The economic loss of these crops would be devastating at $28.4 million. IR-4’s research helped to register 10 Section 18 Emergency Exemptions for New Jersey, that helped prevent this loss from occurring (see back). A registration is granted by the Environmental Protection Agency (EPA) for a particular pest control product on a specific crop. Many of these have been turned to permanent registrations. In 2003, ninety-five of the 120 Section18 Emergency Exemptions that were converted to final registrations were credited to IR-4 by the EPA.

IR-4 Provides Research in Support of a Safe and Secure US Food Supply

The Reduced Risk chemicals that IR-4 researches receive clearances from the Environmental Protection Agency (EPA), and are able to control pests that destroy crops without harming the individuals that use them, the food that is harvested, or the environment in which the crops are grown.

IR-4 Helps US Farmers Compete in a Global Economy

With farm production costs rising every day, IR-4 research helps growers stay ahead of global competition, by producing safe and effective pest management solutions for their high value specialty crops.

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1 1997 Census of Agriculture
2 Cumulative from 1998 to 2002
# What IR-4 Does for New Jersey

## Clearances On Some Important New Jersey Crops

<table>
<thead>
<tr>
<th>Apple</th>
<th>2,4-D</th>
<th>Aluminum Phosphide</th>
<th>Codling Moth Granulosis Virus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apricot</td>
<td>2,4-D</td>
<td>Malathion</td>
<td>Pronamide</td>
</tr>
<tr>
<td>Asparagus</td>
<td>2,4-D</td>
<td>Bacillus thuringiensis</td>
<td>Chlorpyrifos</td>
</tr>
<tr>
<td>Blueberry</td>
<td>2,4-D</td>
<td>Bacillus thuringiensis</td>
<td>Chlorpyrifos</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Bacillus thuringiensis</td>
<td>Chlorpyrifos</td>
<td>Clopyralid</td>
</tr>
<tr>
<td>Broccoli RAAB</td>
<td>Bacillus thuringiensis</td>
<td>Chlorpyrifos</td>
<td>Clopyralid</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Bacillus thuringiensis</td>
<td>Chlorpyrifos</td>
<td>Clopyrazole</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>Bacillus thuringiensis</td>
<td>Glyphosate</td>
<td>Imidacloprid</td>
</tr>
<tr>
<td>Cilantro</td>
<td>Azoxystrobin</td>
<td>Sethoxydim</td>
<td>Spinosad</td>
</tr>
<tr>
<td>Carrot</td>
<td>Bacillus thuringiensis</td>
<td>Glyphosate</td>
<td>Ipodione</td>
</tr>
<tr>
<td>Cucumber</td>
<td>Bacillus thuringiensis</td>
<td>Clomazone</td>
<td>Dimethomorph</td>
</tr>
<tr>
<td>Cilantro</td>
<td>Azoxystrobin</td>
<td>Sethoxydim</td>
<td></td>
</tr>
<tr>
<td>Chinese Cabbage (NAPA) cont.</td>
<td>S-Metolachlor</td>
<td>Sodium Hypochlorite</td>
<td></td>
</tr>
<tr>
<td>Cranberry</td>
<td>2,4-D</td>
<td>Acephate</td>
<td>Azoxystrobin</td>
</tr>
<tr>
<td>Endive</td>
<td>Bacillus thuringiensis</td>
<td>Formic Acid</td>
<td>Menthol</td>
</tr>
<tr>
<td>EGGPLANT</td>
<td>Bacillus thuringiensis</td>
<td>Bifenthrin</td>
<td>Glyphosate</td>
</tr>
<tr>
<td>Honey and Beeswax</td>
<td>Bacillus thuringiensis</td>
<td>Fluazifop</td>
<td>Imazethapyr</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Bacillus thuringiensis</td>
<td>Bifenthrin</td>
<td>Imazethapyr</td>
</tr>
<tr>
<td>Lima Bean</td>
<td>Bacillus thuringiensis</td>
<td>Sodium Chlorate</td>
<td>continued on back</td>
</tr>
</tbody>
</table>
### Clearances On Some Important New Jersey Crops

#### MUSTARD GREENS
- *Bacillus thuringiensis*
- *Bensulide*
- *Chlorpyrifos*
- *Clethodim*
- *Clopyralid*
- *Esfenvalerate*
- *Glyphosate*
- *Malathion*
- *Methomyl*
- *PCNB*
- *Sodium Hypochlorite*

#### PEACH cont.
- *Glyphosate*
- *Iprodione*
- *Malathion*
- *Oxytetracycline*
- *Pronamide*

#### PEAR
- *2,4-D*
- *Codling Moth Granulosis Virus*
- *Diflobenzuron*
- *Diphenylamine*
- *Lignin Sulfonate*
- *Malathion*
- *Methomyl*
- *Oxytetracycline*
- *Permethrin*

#### PEPPER (BELL)
- *Bacillus thuringiensis*
- *Clomazone*
- *Glyphosate*
- *Imidacloprid*
- *Paraquat*
- *Permethrin*
- *S-Metolachlor*

#### PEPPER (NON-BELL)
- *Bacillus thuringiensis*
- *Bifenthrin*
- *Clomazone*
- *Glyphosate*
- *Hexais*
- *Malathion*
- *Norflurazon*
- *Oxyfluorfen*
- *Sethoxydim*
- *Sulfur*

#### PLUM
- *2,4-D*
- *Clopyralid*
- *Codling Moth Granulosis Virus*
- *Fludioxonil*
- *Iprodione*
- *Pronamide*

#### POTATO
- *2,4-D*
- *Bacillus thuringiensis*
- *Calcium Hypochlorite Complex*
- *Copper Complex*
- *Sethoxydim*
- *Sodium Chlorate*
- *Spinosad*

#### SQUASH (WINTER/SUMMER)
- *Bacillus thuringiensis*
- *Clomazone*
- *Dimethomorph*
- *Glyphosate*
- *Imidacloprid*
- *Metalaxyl + Mancozeb*
- *Paraquat*
- *Permethrin*

#### TURNIP (ROOT/GREENS)
- *Bacillus thuringiensis*
- *Chlorpyrifos*
- *Clopyralid*
- *Esfenvalerate*
- *Pronamide*

#### WATERMELON
- *Bacillus thuringiensis*
- *Bifenthrin*
- *Glyphosate*
- *Imidacloprid*
- *Metalaxyl + Mancozeb*
- *Paraquat*
- *Permethrin*

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**Contact Information for IR-4 Regional Field Coordinators**

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>Ms. Edith Lurvey</td>
<td>315.787.2308</td>
<td><a href="mailto:ell10@cornell.edu">ell10@cornell.edu</a></td>
</tr>
<tr>
<td>North Central</td>
<td>Dr. Satoru Miyazaki</td>
<td>517.432.3100 ext. 150</td>
<td><a href="mailto:ncrir4@msu.edu">ncrir4@msu.edu</a></td>
</tr>
<tr>
<td>Southern</td>
<td>Dr. Charles Meister</td>
<td>352.392.2399</td>
<td><a href="mailto:cmeister@mail.ifas.ufl.edu">cmeister@mail.ifas.ufl.edu</a></td>
</tr>
<tr>
<td>Western</td>
<td>Ms. Rebecca Sisco</td>
<td>530.752.7634</td>
<td><a href="mailto:rsisco@ucdavis.edu">rsisco@ucdavis.edu</a></td>
</tr>
<tr>
<td>USDA-ARS</td>
<td>Dr. Paul H. Schwartz</td>
<td>301.504.8256</td>
<td><a href="mailto:schwartp@ba.ars.usda.gov">schwartp@ba.ars.usda.gov</a></td>
</tr>
</tbody>
</table>

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*Major funding for IR-4 is provided by Special Research Grants and Hatch Act Funds from USDA-CSREES, in cooperation with the State Agricultural Experiment Stations, and USDA-ARS. To learn more about IR-4 programs, visit the IR-4 web site at www.ir-4.rutgers.edu*
IR-4: A Success Story Worth Telling

Since 1963, the IR-4 Project has cooperated with researchers, producers, the agri-chemical industry and federal agencies to secure regulatory clearances for pest management products on specialty crops.

Since 2000, over 80% of IR-4's research effort has involved new pest management technology with biopesticides and Reduced Risk chemistries. This huge shift was a direct result of the focus IR-4 placed on advocating this new technology. It was accomplished through a three pronged approach consisting of partnering with the agricultural chemical companies, educating specialty crop stakeholders, and partnering with the EPA to facilitate specialty crop registrations.

IR-4 recognized that without access to the new technology it could not assist specialty crop growers. So they solicited industry's willingness to work together on new product development strategies which, for the first time, included specialty crops in their development plans. The foundation for this close working relationship was crop grouping, where studies on a few key crops would allow for registration on many more crops; many of those were specialty crops.

The other aspect of IR-4's emphasis on new technology was the educational facet. It became clear that with reduced staffs in many of the companies due to mergers, federal and state research/extension scientists were not always given the ability to test the new materials. IR-4 instituted a mechanism through publication of New Pest Control Products/Transition Solutions List to inform the public about the virtues of the new technology to assist in the transition away from FQPA vulnerable crop protection tools.

Today, IR-4 continues to work as a model government funded program due to unique partnerships formed between the USDA (CSREES and ARS), the IR-4 Headquarters and Regional staff, the land grant university system, the crop protection industry, commodity and grower groups and the Environmental Protection Agency (EPA).

New Jersey Agriculture is Heavily Dependent on Specialty Crops

IR-4 thanks the entire Congressional delegation from New Jersey for their support.

Estimated Potential Loss Without Use of the IR-4 Based Section 18s for New Jersey
(from 1998-2002)

<table>
<thead>
<tr>
<th>Crop</th>
<th>Economic Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blueberry</td>
<td>$ 10,400,000</td>
</tr>
<tr>
<td>Cranberry</td>
<td>$ 10,200,000</td>
</tr>
<tr>
<td>Stone Fruit</td>
<td>$ 7,800,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 28,400,000</strong></td>
</tr>
</tbody>
</table>