IR-4 Provides Economic Viability

The specialty food crop value in Wisconsin is $653.7 million. Specialty crops include most vegetables, fruits, nuts, herbs, nursery and flower crops.

IR-4’s research helped to register Section 18 Emergency Exemptions for Wisconsin that helped prevent a loss of $152.1 million from occurring (see back). A registration is granted by the Environmental Protection Agency (EPA) for a particular pest control product on a specific crop. In 2003, ninety-five of the 120 Section 18 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 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.

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.ir4.rutgers.edu
What IR-4 Does for Wisconsin
Clearances On Some Important Wisconsin Crops

The IR-4 Project
Providing Safe and Effective Pest Management Solutions for Specialty Crop Growers

ALFALFA
Aluminum Phosphide
Glyphosate
MCPP
Pronamide

BEAN (DRY)
Bacillus thuringiensis
Chlorothalonil
Cyromazine
Halosulfuron
Sodium Chlorate

BEET (GARDEN)
Bacillus thuringiensis
Endothall
Sethoxydim

BROCCOLI
Bacillus thuringiensis
Clopyralid
Chlorpyrifos
Glyphosate
Malathion
Oxyfluorfen
Paraquat
Sodium Hypochlorite

CABBAGE
Bacillus thuringiensis
Clopyralid
Chlorpyrifos
Clomazone
DCPA
Endothall
Glyphosate
Malathion
Methomyl
Oxyfluorfen
Paraquat
Sodium Hypochlorite

CELERY
Bacillus thuringiensis
Carbaryl
Glyphosate
Malathion
Methamidophos
S-metolachlor
Sethoxydim

CARROT
Bacillus thuringiensis
Glyphosate
Iprodione
Malathion
Metribuzin
Paraquat
Sethoxydim
Thiabendazole

CHERRY (TART)
2,4-D
Methyl Anthranilate
Clopyralid
Fludioxonil
Permethrin
Pronamide

CLOVER
MCPP
Pronamide

CRANBERRY
2,4-D
Acephate
Azoxystrobin
Chlorothalonil
Chlorpyrifos
Clopyralid
Cryolite
Ferbam
Fosetyl-Al
Glyphosate
Maleic Hydrazide
Metalaxyl
Phospholipid (EUP)
Propiconazole (Sec. 18)
Pyridaben
Sethoxydim
Tebufenozide

CUCUMBER
Bacillus thuringiensis
Clomazone
Dimethomorph
Glyphosate
Imidacloprid
Paraquat
Permethrin

GINSENG
Chlorothalonil (Sec. 18)
Fosetyl Al
Iprodione
Mancozeb (Sec. 18)
Metalaxyl

HONEY and BEESWAX
Bacillus thuringiensis
Formic Acid
Methol

HORSERADISH
Bacillus thuringiensis
DCPA
Methomyl
Oxyfluorfen
Permethrin

LIMA BEAN
Bacillus thuringiensis
Cyromazine
Sodium Chlorate

LINGONBERRY
Glyphosate

MAPLE SAP
Carbaryl

MINT
2,4-DB
Acephate
Bacillus thuringiensis
Bentazon
Bromoxynil
Chlorothalonil
Chlorpyrifos
Clopyralid
Clomazone
Clethodim
Clopyralid
Glyphosate
Malathion
Methomyl
Mylobutanil
Paraquat
Propiconazole
Quinalofop
Clearances On Some Important Wisconsin Crops

MINT cont.
Sethoxydim
Tebufenozide
Trifluralin

MUSHROOM
Chlorothalonil
Cinnamaldehyde
DDVP
Dimethobenzuron
Malathion
Propiconazole
Pseudomonas fluorescens

MUSTARD GREENS
Bacillus thuringiensis
Bensulide
Chlorpyrifos
Esfenvalerate
Glyphosate
Malathion
Methomyl
PCNB
Sodium Hypochlorite

ONION (DRY)
Bacillus thuringiensis
Bromoxynil
Chlorpyrifos
Dimethomorph
Glyphosate
S-metolachlor
Pendimethalin
Permethrin

ONION (GREEN)
Bromoxynil
Cypermethrin
Dimethomorph
Glyphosate
Methomyl
Paraquat

PASTURE GRASS
Bacillus popilliae
Bacillus thuringiensis
Dimethobenzuron
Lagenidium giganteum
Methomyl

PEA (DRY)
Bacillus thuringiensis
MCPB
Sethoxydim
Sodium Chlorate

PEA (SUCCULENT)
Bacillus thuringiensis
Clomazone
Malathion

PEPPER (BELL)
Bacillus thuringiensis
Bifenthrin
Clomazone
Glyphosate
Imidacloprid
S-metolachlor
Paraquat
Permethrin

PEPPER (NON-BELL)
Bacillus thuringiensis
Bifenthrin
Clomazone
Glyphosate
Imidacloprid

POTATO
2,4-D
Bacillus thuringiensis
Calcium Hypochlorite
Copper Complex
Sethoxydim
Sodium Chlorate
Sulfuric Acid

RAPESEED
Bifenthrin
Glyphosate
Trifluralin

RASPBERRY
2,4-D
Bifenthrin
Capta
Chlorpyrifos
Glyphosate
Hexakis
Malathion
Myclobutanil
Norflurazon
Oxyfluorfen
Sethoxydim
Sulfur

RHUBARB
Bacillus thuringiensis
Fluazifop
Gibberellic Acid
Napropamide
Paraquat
Pronamide
Sethoxydim

RUTABAGA
Bacillus thuringiensis

SNAP BEAN
Clomazone
Lactofen
Myclobutanil
Sodium Chlorate

SPINACH
Azoxyostrobin
Bacillus thuringiensis
Clothodim
Clopyralid
Glyphosate
Malathion
S-metolachlor (Sec. 18)
Phenmedipham
Sethoxydim

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

SUGAR PEA
Bacillus thuringiensis

SUNFLOWER
Carbaryl
Glyphosate
Malathion

SWEET CORN
2,4-D
Bacillus thuringiensis
Glufosinate (Sec. 18)
Propargite

TREFOIL
Azinphos-methyl
Carbaryl
Malathion
Pronamide

TURNIP (ROOT / GREENS)
Bacillus thuringiensis
Clopyralid
Chlorpyrifos
Esfenvalerate
Fosetyl-AMalathion
Methylation
Paraquat
Permethrin
Sinosad
Tebufenozide

WATERMELON
Bacillus thuringiensis
Bifenthrin
Glyphosate
Metalaxyl + Mancozeb
Paraquat
Permethrin

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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 Food Quality Protection Act (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 EPA.

Wisconsin Agriculture is Heavily Dependent on Specialty Crops

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

Estimated Potential Loss Without Use of IR-4 Based Section 18s for Wisconsin

<table>
<thead>
<tr>
<th>Crop</th>
<th>Economic Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canteloupe, cucumber</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>watermelon, squash</td>
<td>$3,200,000</td>
</tr>
<tr>
<td>Cranberry</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Ginseng</td>
<td>$138,800,000</td>
</tr>
<tr>
<td>Mint</td>
<td>$2,400,000</td>
</tr>
</tbody>
</table>

Total $152,100,000

1 1997 Census of Agriculture
2 From 1998 to 2002