

Information Exchange

A New Look for IR-4

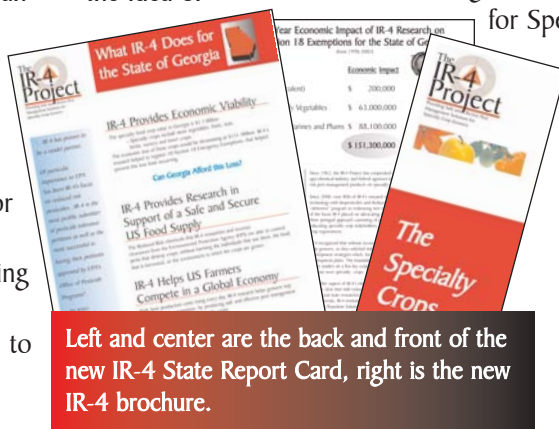
"You can have brilliant ideas, but if you can't get them across, your ideas won't get you anywhere."
— Lee Iacocca

IR-4 recently took on an effort to better communicate the ideas and work of its researchers, partners and stakeholders by creating a new look for all IR-4 publications. The look, which is being launched with this newsletter is designed to be easier to read and stimulate interest.

The idea of creating a look that is consistent throughout all publications, presentations and posters, is related to the idea of

"branding", which companies do to generate recognition of their product or service. Who hasn't seen the Golden Arches or the Swoosh and recognized the company? It is our hope that when someone sees this new look, they will think of IR-4 as producing "Safe and Effective Pest Management Solutions for Specialty Crop Growers."

But How Much Will This New Look Cost?
Even though the New Look is a livelier



Left and center are the back and front of the new IR-4 State Report Card, right is the new IR-4 brochure.

production piece, it actually costs about \$800 less per issue than the previous newsletter. The savings come from the number of pages and cost of mailing, as well as working with a more economical printer.

Regional Representation
IR-4 not only wanted to give the newsletter a face lift, it also wanted to broaden the scope of the newsletter. In order to do this, an IR-4 newsletter committee was created for the purpose of having each region and the Commodity Liaison Committee represented. One criticism about the past publication was that it was too HQ centered and did not offer much information about what was happening in the regions. The newsletter committee was formed to answer that criticism and offer a solution.

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Did You Know?

IR-4 Establishes New Ornamental Research Centers

Contributors to this article include: Heiner Lieth, Ron Lane, Linda Dodge, and Dr. Andy Senesac

IR-4 has announced the establishment of an Ornamental Research Center at the Rutgers Tree Fruit Research Center in Cream Ridge, NJ, a second center at the University of California, Davis, and a third center located in

Riverhead, NY. The New Jersey Ornamental Research Center is being funded in partnership with IR-4 and the NJ Agricultural Experiment Station (NJAES). NJAES has partnered with IR-4 to place more research

emphasis in the green industry to assist growers. In this initial year, 38 research trials have been initiated. Growers, researchers and other stakeholders at the IR-4 Ornamental Priority Setting Workshop

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2 Hall of Fame Award Winners

4 Controls to Ensure Safety

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Hall of Fame Award Winners

This year, the IR-4 Project Management Committee (PMC) members, selected two Hall of Fame Award Winners, J. Ray Frank (Ray) and Neal Thompson.

The Hall of Fame Award is presented to a person or persons who have made significant improvement in productivity and management for the IR-4 programs.

Ray served as the IR-4 Ornamentals Program



J. Ray Frank, IR-4 Ornamentals Manager from 1993-2003, receives an IR-4 2003 Hall of Fame Award.

Manager for ten years. When he took over the program there were an average of 356 new clearance requests and 172 products registered per year. Ray invigorated the program during his tenure and increased the yearly average to 1300 new requests and 500 products registered.

Ray worked with the Crop Protection industry to obtain financial support for the annual IR-4 Ornamental Workshops and worked

with growers to assist them in finding solutions for Ornamental label expansions. When he was employed with USDA/ ARS (1977-1993), Ray was an enthusiast for contributing to IR-4's efforts in the collection of data for both the food and ornamental programs. Ray also serves as a member of the editorial board of the Journal of Environmental Horticulture. IR-4 Executive Director, Bob Holm, presented the Hall of Fame Award to Ray at his retirement dinner in October 2003.

Bob also presented the Hall of Fame Award to Dr. Neal Thompson. Neal officially retired from the University of Florida in June 2003. Neal served as the IR-4 Southern Region Administrative



Neal Thompson (left) retired as the IR-4 Administrative Advisor for the Southern Region in June. Executive Director, Bob Holm presented Neal with an IR-4 2003 Hall of Fame Award at Neal's retirement dinner in October 2003.

Advisor from 1980 - 2003 and was the chair of the PMC from 1976 - 1980. During his tenure at the University of Florida, Neal put his efforts into involving all the southern states in IR-4 research, and was instrumental in the development of satellite laboratories. He also participated in the southern states' field activities. Neal's retirement plans include spending time in the mountains, visiting family and grandchildren, and giving more of his time to church activities. ▲

New Look continued on from page 1

The first meeting of the newsletter Committee was held on September 16, 2003 in Portland at the Food Use Workshop. At that meeting, the committee decided what information should be included in the new IR-4 Newsletter. The committee members include: IR-4 Communications Coordinator and Editor, Sherrilynn Novack; Northeast Regional Field

Coordinator, Edith Lurvey; Western Regional Assistant Field Coordinator, Stephen Flanagan; Southern Regional Field Coordinator, Charlie Meister; North Central Regional Director and Chair of the IR-4 Project Management Committee, Bob Hollingworth; USDA/ARS Field Representative, Ben Fraelich; Commodity

Liaison Committee member, Dave Trinka of MBG Marketing; and representing IR-4 HQ, Assistant Research Scientist, Diane Infante and Weed Science Coordinator, Fred Salzman. The Committee decided the newsletter should contain: a Calendar of Events, a Did You Know section, a Personality Piece, Feature Articles, an Information Exchange and a brief listing of Tolerance Successes.

Look for these sections in this issue and let us know what you think about the new look and approach to communications. Also, don't forget to visit the IR-4 web site where we hope to show off the new look soon. If you have information you feel should be included in future newsletters, please contact your regional newsletter committee member, or Sherrilynn Novack at novack@aesop.rutgers.edu. ▲

Centers

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identified all of these trials as being high priorities. Several growers have generously provided the plant material used in the IR-4 trials. These growers include: Centerton Nursery, Cumberland Nursery, Dean's Evergreens, Brock Farms Inc., Crowshaw Nursery, and the NJ State Forestry Resource Education Center.

Funding for the establishment of the IR-4 Ornamental Center at UC Davis has been provided by the California Department of Food and Agriculture's (CDFA) Buy California Initiative (www.cdfa.ca.gov/mkt/mkt/BuyCalif_intro.htm) and USDA.

The Department of Environmental Horticulture at UC Davis is working with IR-4, ornamental growers and registrants to develop data needed for registration of crop protection materials that are of particular interest to growers in the Western United States. In its first year, the UC Davis center (<http://envhort.ucdavis.edu/ir4/>) has focused on 40 projects involving plant growth regulators and reduced-risk fungicides. A number of

California plant producers have cooperated with the center or donated plant material including: Monrovia Nursery, Hines Nursery, Nurserymen's Exchange, The Plug Connection and High Ranch Nursery. Dr. Heiner Lieth, the UC Davis IR-4 Center Director, has been tireless in his efforts to encourage participation by western region growers and registrants in the IR-4 program.

The NY center, located on the eastern end of Long Island, in Cornell's Long Island Horticultural Research and Extension Center (LIHREC). Researchers at the LIHREC have been conducting IR-4 assisted ornamentals research for several years. Funding for the capital improvements of the Center was provided by the IR-4 Project. In recent years, research in container grown crops and herbaceous perennials has been a major focus area. Generally 35 to 50 projects per year are completed under the supervision of weed scientist, Dr. Andy Senesac.

Plant material and other

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March 1-3, 2004

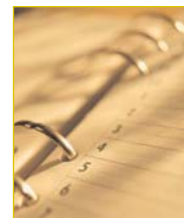
IR-4 Southern/Northcentral Region
GLP Training Session
Orlando, FL
Contact: Robin Adkins 352.392.1978

August 17-18, 2004

Southern Region Annual Meeting
Wilmington, NC
Contact: Robin Adkins 352.392.1978

September 22-24, 2004

IR-4 Food Use Workshop
Orlando, FL
Contact: Cheryl Ferrazoli 732.932.9575 x 601



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Controls to Ensure Safety

—by Andrew Landers, Ph.D., C. Eng
 Pesticide Application Technology Specialist, Cornell University,
 NY State Agricultural Experiment Station.
 For more information about Pesticide Application Technologies,
 contact Dr. Landers at 315.787.2429 or ajl31@cornell.edu

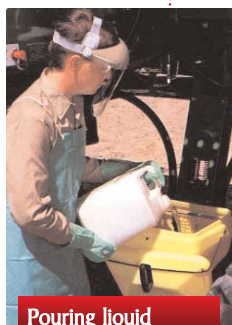
Handling and applying pesticides is risky business; keeping exposure to a minimum shouldn't be. To reduce the risks associated with handling and applying pesticides, devices known as engineering controls can be used to reduce or eliminate exposure to agricultural pesticides. This article is an overview of the controls that are available to safeguard the operator, the environment and the equipment.

Closed Transfer Systems

Closed transfer systems allow concentrated pesticide to be moved

from the original shipping container to the sprayer mix tank with minimal or no applicator contact.

Many systems provide a method to measure the concentrated pesticide and some systems include a container



Pouring liquid pesticide into a low level induction bowl

rinsing system. Closed transfer systems may use a probe inserted into the pesticide container, a connector on the container that mates to a similar connector on the application equipment,

or a vacuum-type (venturi) system that uses flowing water to transfer the chemical from the container.

Induction Bowls

Induction bowls are metal, plastic or fiberglass hoppers attached to the side of the sprayer or the nurse tank that allow pesticides to be added to the mix tank without the applicator climbing

onto the spray rig. Pesticides are poured into the bowl and water is added to flush out the bowl and carry the pesticide to the spray tank. A rinse nozzle is often mounted inside the bowl for rinsing out empty pesticide containers. Induction bowls can be raised out of the way during spraying and lowered to about 3 feet above ground for loading the sprayer.

Direct Pesticide Injection Systems

Direct pesticide injection systems allow pesticides to be mixed directly with water in the sprayer plumbing system rather than in the main spray tank. The pesticide is pumped from its container and mixed with the water either in a manifold or at the main water pump. Only clean water is held in the main tank of the sprayer. An electronic

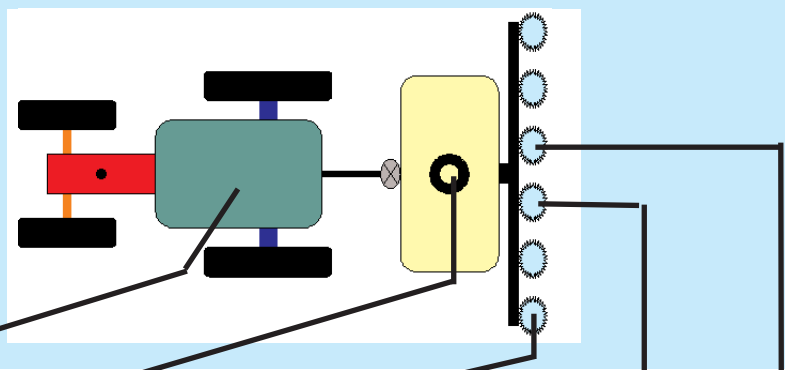


Hand wash station



Loading mechanism

Areas of Potential Pesticide Exposure Risk & Engineering Controls to Reduce Exposure



Area of Exposure	Spray drift or contaminated clothing in cab	Loading sprayer	Spray drift	Changing blocked nozzles or moving boom	Cleaning spray equipment
Methods of Reducing Exposure	<ul style="list-style-type: none"> Pressurized cab with carbon air filter Protective clothing locker 	<ul style="list-style-type: none"> Closed transfer system Direct pesticide injection Container rinse system Chemical induction bowl 	<ul style="list-style-type: none"> Air-assisted boom Low-drift nozzles Twin-fluid nozzles 	<ul style="list-style-type: none"> Multiple nozzle bodies Hydraulic boom fold/extend system Diaphragm check valves Hand wash water supply 	<ul style="list-style-type: none"> Tank rinse system



Washing and tank water supplies

controller and up to four pumps adjust the amount of concentrated pesticide that is injected into the water stream, allowing for variable application rates.

Container Rinse Systems

Container rinse systems consist of a rinse nozzle and a catch bowl that traps the container washings (rinsate). The empty container is placed over the rinse nozzle and a jet of water cleans the inside of the container. The rinsate caught in the bowl is pumped into the spray tank to be used along with the spray mixture. Often rinse nozzles are installed in chemical induction bowls. Most closed transfer systems also provide a way of rinsing containers and piping the rinse water into the spray tank.



the sprayer

Boom Folding/Extending

Manually folding booms can be a major source of operator contamination because the boom can be covered with pesticide from drift or dripping nozzles. Operators should consider the use of hydraulic or mechanical folding methods.

Diaphragm Check Valves

Typically, when a sprayer is shut off and as the system pressure

drops, any liquid remaining in the boom piping drips from the nozzles, possibly dripping onto the boom or even the operator. Diaphragm check valves prevent this by using a spring-loaded rubber diaphragm to close off the flow of liquid once the system pressure drops below about 10 pounds per square inch. When the sprayer is switched on and system pressure builds up, the valve opens and allows the liquid to flow through the nozzles.

Multiple Nozzle Bodies

Contamination can occur when operators change or unclog nozzles during an application. Multiple nozzle bodies (or turret nozzles) allow operators to switch between nozzles with a turn of the nozzle body rather than having to unscrew or undo a threaded or a bayonet fitting.

Hand Wash Water Supply

Providing adequate wash water is essential (and often required). A simple container with a hand-operated valve can be mounted on the side of the sprayer to provide clean water for hand washing and personal hygiene.

Cab Filtration Using Carbon Filters

Carbon filtration systems are used to remove

pesticide odor and pesticide-laden mist from fresh air used in a tractor or self-propelled sprayer cab. Carbon filtration systems are often a standard feature on self-propelled sprayers. In 1998, the American Society of Agricultural Engineers (ASAE) adopted testing standards for operator cabs used in pesticide application.

Protective Clothing Lockers

A few sprayer companies offer a simple compartment (or locker) mounted to the side or front of the sprayer where protective clothing can be stored instead of wearing it in the cab. Alternatively a locker can be fitted to the mixer wagon.

Low-Drift Nozzles

Low-drift nozzles create larger-size droplets than conventional nozzles. The larger droplet sizes are less prone to drift, reducing environmental and operator contamination.

Tank Rinse Systems

Tank rinse systems consist of a clean water supply tank mounted to the sprayer and one or more rotating discs or nozzles mounted inside the main sprayer tank. Water is pumped from the clean water tank to the rinse nozzles,

which spray water around the inside of the spray tank. These systems are designed for in-field rinsing of the sprayer so that the tank washings can be applied to the field at label rates.

A survey conducted by Landers and Helms (2001) on behalf of the EPA investigated the availability and awareness of engineering controls for sprayers. The results indicated that with few exceptions, most spray equipment manufacturers are not providing engineering controls as standard equipment. It is hoped that with the development of improved awareness of engineering controls among educators and growers; a demand for safer controls will inspire manufacturers to develop them as standard equipment. ▲

Dr. Landers is a faculty member at Cornell University where his extension research appointment involves the use of engineering solutions to provide safer spraying. He works with pesticide application systems in grapes, apples, vegetables and turfgrass and believes in a multi-disciplinary approach to pesticide application to ensure engineering techniques are biologically effective. Survey results and other related information can be found by visiting the NYSES web site at: nysaes.cornell.edu/ent/faculty/landers/pestapp/



Rinse tank mounted on top of sprayer

Bioterrorism: Regulations that Could Affect You

— by Michael E. Bledsoe, Ph.D. Vice President of Technology and Corporate EHS Officer, Village Farms, L.P.

Bioterrorism and Country of Origin Laws (COOL) Brief overview

Consumer awareness and the effects of September 11, 2001 are changing the way agriculture does business. It is important for you keep up with two major programs that are either in development or like the bioterrorism act, have already been enacted.

This article serves as a brief overview of these regulations and encourages you to contact your associations or visit the specific web site mentioned within.

The Bioterrorism REGS Public Health Security and Bioterrorism Preparedness and response Act of 2002.

This act introduces regulations designed to permit the FDA to be able to track both domestic and imported agricultural products.

Status of Regulation:

It has become active as of December 12, 2003. Internet links: You can find out more about this regulation at

www.FDA.GOV
<http://www.fda.gov/oc/bioterrorism/furls/>

Who does it affect?

Domestic and Imported products, manufacturers, processors, packers and food holders.

of business.

It is important to retain records relating to manufacture, processing, packing, distribution, receipt, holding, or importation of the food for 2 years .

Internet Links

www.FDA.GOV

www.fda.gov/oc/bioterrorism/furls/

www.ams.usda.gov/cool/

Who is exempted?

Farms, restaurants, retail establishments, not-for-profit establishments and fishing vessels.

What is required?

You are required to register your facility by mail (not suggested) or on line at www.fda.gov. It will takes about 15 minutes for each location. You'll need to provide information on owner/operator, and give them contact information. You'll also need to provide information on any changes and type

Importers must give Prior Notice of Imported Foods

Period varies from 2 hours to up to 5 days in advance.

Implementation period:

December 12, 2003 register all locations. August 12, 2004 ends FDA transition period where FDA is expected to conduct education and help ease in the regulations.

Country of Origin Laws (COOL)

These regulations are provisions of the 2002 U.S. Farm Bill.

Status of Regulation:

This regulation is still in review and may be postponed.

Internet links:

www.ams.usda.gov/cool/

Who does it affect?

Retailers and suppliers of beef, Pork, Lamb and farm-raised fish and shellfish, wild fish and shellfish and perishable agricultural commodity (fresh and frozen fruits and vegetables) and peanuts.

What is exempted?

Food Service Establishments and Ingredients in a processed food item.

What is required?

Requires country of origin labeling by label, stamp, mark, placard, or other clear and visible sign at the final point of sale.

Label must be legible, in English, and can not obscure other required information.

While this may seem a bit overwhelming at first the registration process is relatively easy. If you need more information, you can email Mike Bledsoe at mbledsoe@villagefarms.com or give him a call at 407.682.2822. ▲

Clearances

October -

December 2003

Product: Glufosinate Ammonium (Herbicide) BAYER

Trade Name: Rely

Crop(s): Bushberry Subgroup, Lingonberry,
Juneberry, Salal

Federal Register: 29 SEPT 03 (RULE)

PR No: 5291

Product: Quinoxifen (Fungicide) DOW AgroScience

Trade Name: Quintec

Crop(s): Cherry (Sweet and tart), Grape, Hop

Federal Register: 29 SEPT 03 (RULE)

PR No: 7757, 7256, 7350

Product: Sethoxydim (Herbicide) BASF

Trade Name: Poast

Crop(s): Juneberry, Lingonberry, Salal, Pistachio,
Safflower

Federal Register: 29 SEPT 03 (RULE)

PR No: 7793, 3707, 2531

Tolerance Successes

Product: Dimethomorph (Fungicide) BASF

Trade Name: Acrobat, Forum

Crop(s): Brassica Leafy Greens, Taro,
Fruiting Vegetables

Federal Register: 29 SEPT 03 (RULE)

PR No: 7335, 7599, 7841, 7135, 7247, 6750

Product: Zinc Phosphide (Rodenticide) HACCO

Trade Name: Prozap

Crop(s): Alfalfa, Barley, Dry Bean, Sugar Beet, Potato,
Timothy, Wheat

Federal Register: 30 SEPT 03 (RULE)

PR No: 3951, 6123, 6536, 1735, 6632, 2440,
6626, 6055

Product: Vinclozolin (Fungicide) BASF

Trade Name: Ronilan

Crop(s): Canola

Federal Register: 30 SEPT 03

(Time-limited Tolerance [TLT] expires 30 NOV 08)

PR No: 5159

Product: Tebufenozide (Insecticide) DOW

AgroScience Trade Name: Confirm or Mimic

Crop(s): Beet (Garden)

Federal Register: 24 OCT 03

(Time-limited Tolerance [TLT] expires 31 DEC 05)

PR No: 8387

For more information, visit the IR4 web site at www.ir4.rutgers.edu

Partnering Early On Brings Satisfying Results



IR-4's research has contributed to the registrations of Quinoxifen (Product name Quintec--Dow AgroSciences) on cherries, hops and grapes. This success story began early on in the development of Quinoxifen as Dow AgroSciences partnered with IR-4 researchers to register this new fungicide. Quinoxifen was originally selected for commercial development based on European market potential on hops, grapes and other fruit and vegetable crops. When Dow wanted to obtain a US import tolerance for quinoxifen on hops, the US Hops Commission started to evaluate its use on powdery mildew control in resistance management programs, due to its different mode-of-action from registered fungicides. Soon the California grape researchers joined the quest and a ground swell of interest from US growers to have the product registered caught the attention of Dow. A pioneering partnership meeting between IR-4 and Dow was held. Dow management outlined the commercialization (including regulatory) strategy and partnership with IR-4 to develop quinoxifen for hops, cherries, and grapes. The initial partnership has since extended to other fruit and vegetable crops. In 2002, Dow held a Research Forum for university researchers to explore additional US product opportunities and invited two IR-4 plant pathology staff members to actively participate. Brian L. Bret, Dow AgroSciences IR-4 Minor Crops Coordinator thanked IR-4 for its work stating, "Once again, our sincere thanks to all of you for your role in the development and registration of Quintec!" IR-4 Executive Director, Bob Holm responded, "IR-4 shares the pride and feeling of success with you and the Dow AgroSciences Team on the registration of this new fungicide. The partnership between our organizations on this new Reduced Risk product is a fine example of the IR-4 strategy to partner with the crop protection industry to develop new and safer crop protection tools for our specialty crop growers." ▲

Centers

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assistance have been generously supplied by several local nurseries including: H.R. Talmage and Sons, Glover Perennials and Half Hollow Nursery.

The mission of the Centers is to develop efficacy and crop safety data required for registration and/or label clearances for crop protection chemicals that are of interest to growers of ornamentals and other

non-food specialty crops.

IR-4 Ornamentals Manager, Bob



Herrick commented, "These centers will become models for other centers we hope to establish in every IR-4 region. They will focus on efficacy and plant safety. We want to bring producers into the centers and help them with pest identification and recommend possible pest management solutions. Centers like these provide a controlled environment for the establishment of key pests for efficacy studies."

IR-4 encourages the nursery industry to

become more involved in identifying pest management tools. These tools can include reduced risk chemicals or biological materials where there are no effective alternatives and research integrating different chemical classes and shorter reentry intervals.

Suggestions on what should be researched are welcomed and those who wish to should contact the IR-4 Ornamentals Manager Dr. Robert Herrick, located at IR-4 HQ, at 732.932.9575 x 629 or email him at: herrick@aesop.rutgers.edu or contact your Regional Field Coordinator (see side bar). ▲

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• University of Florida • Michigan State University



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