Urban Consumer Use Patterns
Off-Site Movement Potential
Mitigation/Optimization

Rich Martinez
Chief Environmental Officer

Established in 1868, Marysville, OH
Concerns About Homeowner Use

Unnecessary Use
  • Product use without a pest problem

Excessive Use
  • Homeowners use more than labeled rate

Mis-Use
  • Homeowners pick the wrong product
  • Apply product off-target
  • Improper product disposal

Note, homeowners act only when a pest problem sufficiently bothers them, rather than when an economic threshold is reached as in commercial agriculture.
## Scotts California Bifenthrin Sales

<table>
<thead>
<tr>
<th>Product Form</th>
<th>2005</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Units Sold</td>
<td>% Units</td>
<td>Bifenthrin Lbs.</td>
<td>% Bifenthrin</td>
</tr>
<tr>
<td>Liquid Ready-To-Use Products</td>
<td>1,008,104</td>
<td>69%</td>
<td>3,791</td>
<td>36%</td>
</tr>
<tr>
<td>Granule Ready-To-Use Products</td>
<td>375,228</td>
<td>25%</td>
<td>4,018</td>
<td>38%</td>
</tr>
<tr>
<td>Liquid Concentrate Products</td>
<td>87,444</td>
<td>6%</td>
<td>2,672</td>
<td>26%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,470,776</td>
<td>100%</td>
<td>10,481</td>
<td>100%</td>
</tr>
</tbody>
</table>
# Ready-to-Use

## Spot and Perimeter Treatment

(69% of Units Sold, 37% of Bifenthrin pounds applied in CA)

<table>
<thead>
<tr>
<th>Use Patterns (0.05% A.I)</th>
<th>Applicator</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot Applied</td>
<td>Trigger Spray</td>
<td>1. Minimum Exposure</td>
</tr>
<tr>
<td>Indoors &amp; Outdoor</td>
<td></td>
<td>2. Easy to Use - intuitive</td>
</tr>
<tr>
<td>Home Perimeter</td>
<td></td>
<td>3. Minimum Waste - no clean-up or discard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Off-Target Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hard Surface Application (w/out lawn/landscape barrier)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product Labeling</td>
</tr>
<tr>
<td>a. EPA Master Label</td>
</tr>
<tr>
<td>b. Stewardship Actions</td>
</tr>
</tbody>
</table>
RTU Perimeter Spray Treatment

"Typical ½ Acre Lot" 100' x 200'

House 40' x 25'

Garage 20' x 20'

Deck 20' x 20'

Driveway 20' x 90'

Sidewalk 5' x 80'

Garage Door - Driveway

Off Target?
Ready-to-Use Broadcast Granules

(25% of Units Sold, 38% of Bifenthrin pounds applied in CA)

**Use Patterns**
(0.086% – 0.2% AI)
- Broadcast Lawn Insecticide
- Fire Ant Mound Treatment

**Applicator**
- Rotary Spreader
- Drop Spreader

**Benefits**
1. Minimum Exposure (applicator, re-entry)
2. Easy to Use - intuitive
3. Minimum Waste - simple clean-up
4. Accurate Application
5. Minimum Off-target

**Off-Target Potential**
1. Hard Surface Application (sidewalk, street)
2. Sediment Movement (bare soil)

**Mitigation**
1. Applicator Selection
   a. EdgeGuard
   b. Drop Spreader
2. Product Labeling
   a. EPA Master Label
   b. Stewardship Actions
Targeted Fertilizer Application Tool
Scotts Deluxe™ EdgeGuard Broadcast Spreader

Application Edge Control

Center Line

Normal Operation

Targeted Fertilizer Application Tool
Scotts Deluxe™ EdgeGuard Broadcast Spreader
Granular Product Labeling

How to Apply
Apply to dry grass blades.
Apply with a drop or rotary spreader. For best results, use a Scotts Spreader.

Step 1  Mow Lawn
If grass is tall enough to touch bottom of spreader, mow before application.
Keep grass clippings and leaves off streets and sidewalks and out of storm drains.

Step 2  Set Spreader
See Chart below for spreader settings.

Step 3  Fill Spreader
Fill spreader over bare ground or hard surface.
Clean up any spilled product.

Step 4  Apply Product
• Apply fertilizers carefully, avoiding hard surfaces such as driveways or streets.
• Apply one or two header strips, then apply product in longest direction of lawn.
• Shut off spreader each time you reach the header strip, or stop.
This product can cause staining.
• Do not apply to cement, stone, clothing or shoes.
• If contact occurs, brush off particles to prevent staining.

Step 5  Water-In
For best results, water-in thoroughly (up to 1/2 inch of water) if rainfall is not expected within 24 hours. Rain after application will not hurt product performance.

Step 6  Clean-Up
Return unused product to original container.
To keep lawn products from reaching storm sewers, sweep or blow any stray particles from hard surfaces back onto lawn area. Do not clean spreader over hard surfaces or near storm drains.
Concentrates
Various Treatment Methods
(6% of Units Sold, 25% of pounds applied in CA)

Use Patterns
(2.4% A.I.)
- Termite trenching
- Fire Ant mound
- Perimeter insect and carpenter ant
- Broadcast lawn insecticide

Applicator
- Hose-end Sprayer (Dial-N-Spray)
- Tank Sprayer

Benefits
- Lowest cost per application
- Large Coverage Area
- Flexible application rate and method

Off-Target Potential
1. Mixing, loading (exposure)
2. Mixing/application above label rate
3. Hard surface application
4. Disposal
5. Sediment movement off-site

Mitigation
1. Promote Simple Choice product selection
2. De-emphasize concentrates- promote RTU
3. Improve Product Labeling
   a. EPA Master Label
   b. Stewardship actions
4. Consumer Outreach
EPA Pesticide Product Dialogue Committee

- Broad Stakeholder Participation
- Revise EPA Master Label statements for consumer use pesticide products
  - Proactive, directive, and actionable language
  - Improved user understanding and compliance
- PR Notice pending (target June, 2007), current use in re-registration actions

*Environmental Hazards:*
*Do not apply near water, storm drains, or drainage ditches. Do not apply when windy or prior to heavy rainfall. Rinse applicator over lawn or garden area away from storm drains.*
Got Bugs?

Simple Choice
Product Selection System

What?

Lawn
Garden/Landscape
Home

Where?

Few Bugs
Many Bugs

How Much?

Few Bugs
Many Bugs

The Product Solution

Ortho Bug-B-Gon Max
G&L Insect Killer RTU
Turf Builder SummerGuard
Insect Control
Ortho Bug-B-Gon Max
G&L Insect Killer RTU
Ortho Bug-B-Gon Max
L&G Insect Killer Conc.
Ortho Home Defense Max
Perimeter & Indoor
Insect Killer RTU
Ortho Home Defense Max
Insect Killer Granules
Scotts Stewardship Actions

Simplify the Homeowner Experience
  • Easy to choose, easy to use
  • Minimize exposure and waste

Avoid Unintended Consequences
  • Provide appropriate tools to solve homeowner pest problems
  • Continuous product improvement and homeowner education

Monitor Homeowner Behavior
  • Shift in product mix (RTU vs. Concentrates)
  • Shift to targeted applicators (EdgeGuard, Drop)
  • Survey homeowner habits and practices
  • Coordinate with PWG
The Scotts Miracle-Gro Company

Rich Martinez  
Chief Environmental Officer  
Phone: 937 644-7371  
E-mail: rich.martinez@scotts.com

Dr. Bruce Augustin  
Director, Environmental Agronomy  
Phone: 937 644-7646  
E-mail: bruce.augustin@scotts.com

Megan D. Moses  
Manager, Environmental Stewardship and Government Affairs  
Phone: 937 578-5536  
E-mail: megan.moses@scotts.com