

Summary of Public Record: IDALS Pesticide Bureau Case Files for Alleged Spray Drift to Organic, Fruits and Vegetables, and Horticulture. 2008-2012

Compiled Summer 2013 by Practical Farmers of Iowa

Pesticide spray drift is the top concern for fruit and vegetable growers in the membership of Practical Farmers of Iowa. As part of our exploration into spray drift at the request of our farmer-members, Practical Farmers compiled this summary from hard copies of case files stored at IDALS Pesticide Bureau. Pesticide drift cases are public record, but no summary exists to portray an overall picture of drift occurrences on fruit and vegetable farms that have been reported to IDALS.

Overview:

The 58 files summarized here represent spray drift incidents reported to IDALS and classified as "organic," "fruits and vegetables," or "horticulture" that occurred 2008-2012. Other categories of spray drift (non-organic field crops, non-agricultural, etc.) case files were not examined, and no estimates are available for the numbers unreported spray drift incidents. As of October 2, 2013, IDALS received 191 incident reports of alleged pesticide misuse in the 2013 crop year.

Of these 58 files, 47 showed chemical residues at off-target areas, indicating drift had occurred. Fines were issued to applicators in only 11 cases, at an average of \$716 per fined case (seven of the 11 cases with fines assessed had fines of over \$500 for multiple violations). Thirty Warning letters were issued for Iowa Code violations; in six cases where chemical residue was found, no Warnings or penalties were issued because the source of the pesticide could not be determined.

The IDALS Pesticide Bureau investigates pesticide misuse under the authority of The Pesticide Act of Iowa, Iowa Code 206. The Act relies on a reporting system of pesticide accidents, incidents or loss. Reports should be filed within 60 days of the application and prior to harvest of 25 percent of the crop. Reports of possible misuse of pesticides or alleged violations can be reported to the Iowa Department of Agriculture Pesticide Bureau (phone: 515-281-8591, email: pesticides@iowaAgriculture.gov).

The Pesticide Bureau only issues civil penalties for Iowa Code infractions; they do not assist with compensation or other legal action. Civil penalties levied are paid to the State of Iowa General Fund. Penalties, Warnings, and Advisories are issued based on a civil penalty matrix, and civil penalties do not exceed \$500 per code violation. The IDALS enforcement responses issued in the cases below include:

Advisory Warning Letters: Issued in cases where documentation indicates that a violation of Chapter 206 Iowa Code or regulations has occurred, but complicating factors prevent the issuance of a fact finding enforcement action. Examples may include cases where residues of an active ingredient are found in off-target residue samples,

but more than one applicator is documented to have applied identical pesticides within the time frame in question making it difficult, if not impossible, to identify the source of the residues.

Official Notice: A state communication issued by a state pesticide investigator when voluntary corrective action is the best enforcement option. Official notices are most often used to document minor product or RUP Dealer/Applicator recordkeeping violations.

Warning Letter: Written notice from the state pesticide program manager to the person believed to have violated a state pesticide law or regulation. The letter should explain what violation has occurred and the possible consequences for repeat violations.

Administrative Civil Complaints (civil penalty): Written communication alleging one or more violations of specific provisions of Iowa Code Chapter 206, regulations, or a license and/or certification promulgated there under and notice of the assessment of a civil penalty. For civil penalties initiated by IDALS, guidance for the amount of the proposed penalty is addressed by the IDALS civil penalty matrix (see last page of document) which addresses the following components:

- Willfulness of violation
- Actual or potential danger of injury/damage
- Enforcement history
- Actual or potential cost of injury/damage
- Actual or potential cost to Department

For more information on these cases or other spray drift claims, contact the Pesticide Bureau at the Iowa Department of Agriculture and Land Stewardship: (515) 281-8591 or pesticides@iowaAgriculture.gov.

Questions for Practical Farmers of Iowa:
Liz Kolbe, Energy and Horticulture Coordinator
(515) 232-5661
liz@practicalfarmers.org

Case File KEY:

Case Number → Claimant, Location of claimant's farm, Crops/persons affected, Date report filed, number of days after alleged drift event.

- Notes, if applicable
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Type of application (aerial or ground)
- Products sprayed
- Chemicals in sprayed product and levels detected in samples, if any.
- **Enforcement response by IDALS**

#09.0066 → Duane Errett, Harlan, organic corn, 6/26/08, 13 days

- Noticed his field next to the road, across from sprayed corn field, had areas of stunted yellow corn with leaf ends dried and burnt.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Roundup PowerMax
- Glyphosate 0.088, 0.11ppm
- **Civil penalty: \$360** for violation of Iowa Code 206.11(3)(b): use inconsistent with label, and 206.11(4)(d): handling pesticides in a faulty, careless, or negligent manner.

#09.0101 → David and Bryne Cue, Denison, organic pasture, 8/13/08, 1 day

- Cues observed a yellow plane spraying the adjacent soybean field, witnessed several instances of particle drift onto their organic pasture where they graze milking goat breeding stock.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Lorsban 4-E, Sniper
- Chlorpyrifos 2.4ppm, bifenthrin 1.4ppm
- **Warning** for violation of Iowa Code 206.11(3)(b), inconsistent with label; violation of Iowa Admin Code Rule 21-45 26 (3)(206), failing to indicate company's license number and/or applicator's certification number.

#09.0119: Grice's organic farm: crops, livestock, bees. South English, 8/25/08, 2 days

- Listed on Sensitive Crop Registry and Bee Registry
- Mrs. Grice saw a yellow plane spraying fields north of her property, was concerned about drift. She made several phone calls trying to determine chemical being sprayed and applicator. Mrs. Grice was not contacted about spraying, which was required under the Bee Rule at the time. Commercial Applicator had not checked Sensitive Crop Registry and was unclear on who was supposed to contact Mrs. Grice about bees.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Mustang Max and Lorsban 4E
- Chlorpyrifos 1.3ppm, esfenvalerate 0.052ppm, zeta cypermethrin 4.3ppm
- **Civil penalty \$560** for violations of Iowa Code 206.11(3)(b) and 206.11(4)(d) and Admin Code Rule 21-45.31(306). **Official Notice** given onsite for failing to notify Mrs. Grice as required by Bee Rule.

#09.0012 → Larry Engbers, Pella, vineyard, 7/7/08, 19 days

- Mrs. Engbers noticed a section of grape vine with twisted, crinkled leaves.
- Suspected drift from ditch spraying. Applicator had checked Sensitive Crop Registry, records showed GPS marks to avoid Engber's property when spraying.
- No chemical residues detected.
- **No apparent violations** of Iowa Code.

#09.0045 → Joe Grove, South English, vineyard and tomatoes, 6/23/08, 33 days

- Leaves on grapes and tomatoes were curled up, vines dropped young green grapes. Joe Grove replaced 28 tomato plants. Asked Farmer Applicator 2 to pay for replacements, Farmer Applicator 2 refused. Each

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Farmer Applicator commented on a situation where Joe Grove had received substantial compensation for alleged injury to crops from drift.

- To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.
- Farmer Applicator 1: Reflex and Prefix CP
- Farmer Applicator 2: Glyphos X-tra, FS Weed Killer LV400, FS Atrazine 4L
- Farm Employee Applicator 3: Balance Pro and Atrazine
- Ground
- Atrazine 0.038ppm, dicamba 0.011ppm, glyphosate 0.09ppm, detected none: 24D ethylhexyl-ester, isoxaflutole, isoxaflutole MET rpa 202248, metolachlor
- **Closed without penalty** due to inconclusive results; multiple farms spraying and **fault could not be discerned**.

#09.0005→ Edwin Copper, Ionia, sweet corn, 7/3/08, 10 days

- After Farmer Applicator sprayed his field corn, Copper noticed areas of his sweet corn turning brown, purple, and burned looking; stunted in other areas.
- To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.
- Ground
- Roundup Weather Max
- Glyphosate 0.12ppm
- **Warning:** Iowa Code 206.11(3)(b)

#09.0041→ Philip Boehm, Charles City, grapes and tomatoes, 6/30/08, 5 days

- Noticed tomato and grape leaves discoloration at center of tomato plants with new emergence – really looked like herbicide issue. Some leaf curl damage on grape leaves.
- To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.
- Ground
- Liberty, Atrazine 90DL
- No chemical residues detected.
- **No apparent violations** of Iowa Code.

#09.0022 → Tammy and James Mundt, Shell Rock, garden plants, 7/11/08, 3 days

- The Mundts noticed tomatoes yellow and brown spotted, ash tree and squash new foliage was yellow.
- To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.
- Ground
- Touchdown Total
- Glyphosate 0.073ppm
- **Warning:** Iowa Code 206.11(3)(b)

#09.0798→ Steve Rickersten, Charlotte, vineyard, 6/15/09, 3 days

- The day after Farmer Applicator sprayed, Rickersten noticed grape leaves were cupped as though they had been exposed to a phenoxy herbicide.
- To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.
- Ground

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- Sure Start, Traxion
- Glyphosate 0.045ppm, acetochlor and clopyralid: none found
- Rickersten had applied roundup near grapes for weeds; **source of glyphosate could not be determined.**

#09.0728→ David Grunklee, Reinbeck, greenhouse tomatoes, 5/19/09, 13 days

- Tomato leaves were distorted, some purple in color, short internode growth, some bleaching. Rhubarb leaves were bronze underneath with bubbling of leaves. Peas had cupped leaves.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Corvus
- No chemical residues detected.
- **No apparent violations** of Iowa Code.

#09.0695→ David Dean, Seaboro, trees and property, very near house, 5/8/09, 2 days

- Upon coming home from work, Dean noticed a chemical odor and saw nearby fields being sprayed in windy conditions. Later, noticed misshapen and discolored leaves on a variety of trees.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Lumax
- Atrazine: 0.12-0.74ppm; metolachlor 0.038-0.34ppm
- **Advisory:** may have violated Iowa Code 206.11(3)(b)

#10.0039→ Willam Totemeier, New London, property, crops, person, family; 7/29/09, 1 day.

- Converting to organic. Spray applied to Totemeier's soybean field in error, exposed drift to fruit orchard, garden, house, two sons outside. Totemeier, sons, and DNR official witnessed drift and spraying on wrong field. DNR also investigated a related fish kill at Flint Creek.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Laredo fungicide, Cobalt insecticide
- Chlorpyrifos, gamma-cyhalothrin, myclobutanil, pyraclostrobin: all present in gardens, trees, near house, hay bales, Flint Creek.
- **Civil penalty to applicator: \$1,040.** Iowa Code 206.11(3)(b) and 206.11(4)(d). Several Code infractions in addition to applicator error.
- **Warning** for not following safety guidelines
- Contractor given **Warning** for failure to provide detailed flight maps.

#10.0155→ Francis Thicke, Fairfield, organic hayfield, 9/17/09, 17 days

- Neighbor witnessed drift onto Thicke's organic hayfields (from spraying on neighboring soybeans).
- Ground
- Delta Gold, Lorsban 4E
- Chlorpyrifos, deltamethrin
- No chemical residues detected.
- No apparent violations of the Iowa Code.

#10.0106→ Wanda Sandfire, Batavia, person, geese, house, garden, 8/31/09, 2 days

- Burning nostrils and lips, funny taste, swelling of tongue, tooth pain, sore throat, lips, face and arms burning, loss of taste, confusion, upset stomach, diarrhea.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Lorsban 4E
- Chlorpyrifos: shirt 900ng/in², glasses 47ng/in², vegetation 1.5-2.1 ppm. None found on control.
- **Civil penalties: \$460 and \$580** to applicator and contractor.

#10.0080→ Greg Franzenburg, Keystone, person, son, organic cornfield, 8/5/09, 1 day

- Person, son, and organic cornfield hit with drift. Samples taken up to 100ft south of sprayed field contained chemical.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline and Stratego
- Propiconazole 2.1ppm, pyraclostrobin 0.26ppm, trifloxystrobin 1.4ppm
- **Civil penalty \$380**

#10.0122→ Dan Walker, Fairfield, 8/25/09, 3 days

- Walter reported obvious, visible over-spray; plane was making turns with booms still charged.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Asana
- No chemical residues detected.
- **No apparent violations** of Iowa Code.

#10.0044→ Tom Klug, Coggon, beehive and vegetable garden, 7/31/09, 0 days

- Saw drift settle on garden, found dead bees in front of hive.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline and Respect
- Pyraclostrobin 0.0043ppm on dead bees, 0.77ppm on vegetation; zeta cypermethrin 0.67ppm garden
- **\$360 civil penalty**

#10.0150→ Loyd Johnson, Bloomin' Wooley Acres, Nashua, 8/25/09, 3 days

- Complaint of plane flying over house and property (Pesticide Bureau referred Johnson to Federal Aviation Association (FAA)). Also noticed chemical smell.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Cobalt
- Chlorpyrifos 0.051ppm; gamma cyhalothrin: none
- Mr. Johnson was warned to avoid being in the path of potential drift.
- **Advisory** for protocol omissions and drift.

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#10.0110→ Loyd Johnson, Bloomin' Wooley Acres, Nashua, organic vegetables. 8/12/09, 6 days

- Mr. And Mrs. Johnson and three were employees harvesting during spraying.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline
- Very small amounts of pyraclostrobin 0.023ppm in one sample.
- **Warning** issued to Consultant for failure to meet with pilot, **Warning** to applicator for use inconsistent with label.

#10.0012→ Andrew Dunham, Grinnell Heritage Farm, Grinnell, organic hayfield, 7/8/12, 1 day

- Dunham and nine workers in field, saw spray drift misting over the road and settling on organic hay field.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Pilot/company had not checked sensitive crop registry.
- Tilt Fungicide
- Propiconazole 0.0032-0.0097ppm, present in all samples
- **Civil penalty: \$540** for violations of Iowa code 206.11(4)(d) and Admin Code 21-45.22(17)(b)(7) and Admin Code 21-45.26(3)

#10.0077→ Mark Driscoll, Clarinda, berries and CRP, 8/4/09, 1 day

- Observed low-flying plane over his property, suspected drift onto berries and CRP, made video.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline
- Propiconazole 0.0022-0.0061ppm; pyraclostrobin 0.0030
- **Civil penalty \$240** violation of Code 206.19(s) and Admin Code 21-45.22(17)

#10.0082 → Larry Gergen, Bur Oaks Inc, Fertile, pasture, 8/5/09

- Organic grower suspected drift due to cupping and discoloration on weeds.
- Applicator and suspected source unidentified
- Samples were taken and analyzed for mesotrione.
- No chemical residue found.
- No apparent violations of Iowa Code.

#10.0019 → Rebecca Moes, Hornick, greenhouse, 7/14/09, 14 days

- Moes witnessed spray drift entering the south end of the greenhouse (end of June 2009). Greenhouse was <10 feet from the sprayed corn field. Leaves on plants in south end of greenhouse cupped and brown. Plants on east and south side outside the greenhouse were also damaged. Applicator said the sprayer stayed 18-24 rows away from the property.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Castillo and Helosate Plus
- 2,4-D 0.12 ppm; glyphosate none, mesotrione none
- Lab analysis showed residue of 2,4-D; source could not be determined so **no further action** was taken.

- #10.0051 → Ronald Farnum, Red Oak, hay, pasture, and vegetables for canning, 8/3/09, 3 days
- Odor, burning lips; IDALS suggested he can the vegetables and then test for residue before consuming; Farnum claimed they were a total loss.
 - Neighboring Farm Partner said there were no fungicides applied – only pre- and post-treatment for Roundup – but aviation records showed Headline (and Cabrio) were applied.
 - *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
 - Headline fungicide (7/31/09)
 - Aerial
 - Propiconazole 0.037ppm; pyraclostrobin 0.025ppm; trifloxystrobin 0.0021 ppm
 - **Warning:** Iowa Code 206.11(3)(b)
- #10.0579 → Brad Bogue, Rembrandt, vegetables, 4/14/10, 0 days
- Bogue was in the process of certifying his garden organic. He observed the sprayer operating in high winds and spray droplets on a metal building.
 - *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
 - Ground
 - Harness Xtra
 - Acetochlor 0.15, 0.068ppm; atrazine 1.8, 0.046ppm
 - Applicator stated winds at 15-18mph; climatologist recorded winds 12-27mph w/ gusts to 33mph.
 - **Warning:** Iowa Code 206.11(3)(b)
- #10.0783 → Leroy Zimmerman, Orchard, strawberries, 6/23/10, 7 days
- Farmer Applicator applied Halex GT herbicide to corn field. Chemical analysis showed glyphosate but no s-metolachlor. Zimmerman had applied Round-up to strawberries 6 weeks prior to Farmer Applicator spraying corn field.
 - *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
 - Ground
 - Glyphosate 0.3ppm; 6/16/10
 - Farmer Applicator said he was working with Zimmerman on the issue, did not believe there was any drift because weeds in ditch separating were not affected.
 - Source of glyphosate could not be determined; **no apparent violations.**
- #10.0727 → Twyla Hein, Tipton, vegetables and property, 5/27/10, 8 days
- Application Company Manager inspected Hein acreage, did not believe there was damage. ISU horticulture specialist inspected acreage, was unsure of pesticide damage (Pat O'Malley). Richard Colwell (Pesticide Bureau inspector) noticed symptoms of anthracnose disease but also while speckles on older leaves and garden vegetation. More brown spots and yellowing on other plants. Test results showed most of these were diseased (cedar apple rust, frog eye leaf spot, cherry leaf spot, maple anthracnose).
 - *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
 - Ground
 - Valor XLT, Durango DMA, Optill X sprayed on 5/19/2010. applicator recorded winds at 2-7mph and 5-10 mph; climatologist reports winds at 8-9 mph w/gusts to 16
 - Flumioxazin 0.043, 0.017, 0.020ppm; glyphosate 0.58ppm

- **Warning:** Iowa Code 206.11(3)(b)

#10.0728 → Jack Suiter, Sully, vegetables, 5/27/10, 3 days

- Suiter does apply Strategy herbicide in collards and BASF Poast herbicide.
- Farmer Applicator noted that Suiter had a reputation for complaining about pesticide drift "no matter if an actual spray drift incident had occurred."
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Glyphos X-tra; Prefix
- Glyphosate 2.7, 0.58ppm; s-metolachlor 0.33, 0.011ppm
- **Warning:** Iowa Code 206.11(3)(b)

#11.0093 → Anonymous organic farmer near Lansing, 8/6/2010, 2 days

- Pilot saw farmer shaking his fist after two passes and did not continue in the area. Pilot's map was marked with "organic, stay back."
- No samples were taken nor chemical analysis performed because complaint was not formally registered by farmer.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline, Interlock (additive), Between (additive), Respect
- Agronomist 1, Innovative Ag Service Co. **Warning** in violation of Iowa Code Rule 21-44.22(17)(b)(1): Performing the duties of an aerial applicator consultant w/o being certified in Category 11.
- Agronomist 2, Innovative Ag Service Co. **Warning** in violation of Iowa Code Rule 21-44(17)(b) for not performing all the required duties of an aerial applicator consultant.

#11.0042 → Sally Hertz, Nevada, organic vegetable farm, 7/30/10, 2 days

- S. Hertz witnessed spraying of corn field and drift onto her organic gardens. Neighboring Farm Manager had stipulated no spraying was to be within 100 yds. of organic area. No-spray X's were removed in the digital map for the pilot.
- S. Hertz removed affected crops and did not sell.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Quilt fungicide, winds at 2mph
- Azoxystrobin 0.010, 0.0018 ; propiconazole 0.016, 0.061ppm
- **Civil penalty of \$480** for violation of Iowa Code 206.11(3)(b) paid by Application Company Owner.
- Consultant given **Warning** in violation of Iowa Code Rule 21-45-22(b)(2) (not submitting names of aerial applicators) and Iowa Code Rule 21-45.22(17)(c)(3) not following label directions.

#11.0014 → Rich and Erika Dana, Guernsey, organic catnip, in transition to organic soybeans, 7/14/10, 0 days

- Erika Dana confronted the man in the truck, he called Application Company Manager. Application in the area stopped for the day.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Climatologists wind report 10-19mph w/ gusts to 25mph

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- Bullzeye herbicide and Headline fungicide
- Pyraclostrobin: 0.024, 0.014, 0.038 ppm, no glyphosate detected
- Plant Manager of Application Company given **Warning** in violation of Iowa Code 206.11(3)(b): using a pesticide in a manner inconsistent with labeling and Iowa Admin Code Rule 21-45.26(3): not having complete application records.

#11.0029 → Vernon Zahradnik, Central City, market vegetables and potato patch, 7/26/10, 0 days

- Zahradnik thought he witnessed overspray to potato patch, further drift.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline fungicide
- Pyraclostrobin: 1.9, 1.5, 0.016 ppm
- **Warning** in violation Iowa Code 206.11(4)(d) issued to Commercial Applicator.

#11.0635 → Angela Jackson, Vermillion, South Dakota, organic winter wheat, 5/9/11, 4 days

- Ms. Jackson witnessed a cloud of spray blow onto her property and her person. Wheat began turning yellow/pale green. Jackson is registered on Iowa sensitive crop registry.
- Applicator said they stayed 30ft from the property line, did not notice any drift. Neighbors on the other side sprayed Harness Xtra on 5-11-11.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Gly Star Plus and Agri Star 2,4-D LV, 5/5/11, Applicator reported wind at 10mph; climatologist reported 13-24 mph.
- 2,4-D 2-ethylhexyl ester none; 2,4-D acid 0.17, 0.071, 0.13ppm; glyphosate none
- Application Company Owner given **Warning** Iowa Code 206.11(3)(b): inconsistent with labeling.
- Agronomy Sales Associate given **Warning** Iowa Code 206.11(3)(b): inconsistent with labeling.

#11.0786 → William Wyant, Fireside Winery, Marengo, vineyard, 6/20/11, 34-46 days

- Mr. Wyant saw problems on the grapevines he believed were caused by herbicides. Doug Doohan (Ohio State University weed scientist) also inspected vineyards in Conroy and Marengo and noticed effects of herbicide. Pesticide Bureau inspector (Richard Colwell) did not see much that looked like pesticide/herbicide damage.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Keystone, SureStart, Cornbelt Atrazine 4L, Bayer Corvus to soybean and corn fields. Applications on 5/5/11, 5/12/11, 5/17/11
- No residues were found for: 2,4-D, acetochlor, clopyralid; no other chemicals were tested.
- **Notice of advisory:** violation of Iowa Admin Code 21-45 26(3)(206): name and license number of applicator.

#11.0765 → Ron Juergens, Carroll, vineyard, 6/14/11, 6 days

- Juergens saw some leaves curling, might have seen some drift during spraying.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground

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- Glyphosate, mesotrione sprayed on 6/8/11
- No chemical residues detected.
- Farmer Applicator given **Warning** for violation of Iowa Code 206.11(3)(b): inconsistent with label (winds was 16-20mph with gusts to 26 mph); label states not to apply with winds over 10mph.

#11.0724 → Steve Streeper, independent sales rep for Pioneer Company on behalf of Fireside Winery (Wyant, owner), Marengo, vineyard, 6/6/11, 27 days

- Noticed leaves dropping off vines, some leaves were cupped or elongated. Estimated loss of 2,000 separate grapevines. Phenoxy-type herbicide symptoms were noted. Wyant uses Rely herbicide under the vines.
- Glyphosate: 0.052 – 0.16ppm
- Other surrounding fields: Wyant treated corn with Breakfree ATZ and Prequel (to the north), to the south with DuPont Envive and Breakfree ATZ, east with Breakfree and Prequel. East fields owned by Farmer Applicator 1, southeast owned by Farmer 2 (his land did not appear treated). Wyant's large lawn appeared to be sprayed, too.
- No directional pattern of herbicide drift could be detected.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Dupont Breakfree ATZ, Abundit Extra, and Tenkoz Lo-Vol 4
- **No apparent violations**; chemical analysis showed glyphosate (Abundit) but no other residues; source of glyphosate could not be determined.

#11.0738 → Fred Verschuure, Oskaloosa, vineyard, 6/13/11

- Vineyard showing possible 2,4-D damage.
- 2,4-D and dicamba: none detected; glyphosate: 0.043ppm
- Chemical analysis showed glyphosate residue. Verschuure had applied Round-up; potential self-damage.
- **No violations**

#12.0070 → Dean Thorson, Decorah, organic alfalfa, 8/4/11, 0 days

- Thorson saw spray drift and also saw the helicopter land on his organic alfalfa field.
- Headline AMP fungicide
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Metconazole 0.42, 0.43ppm ; pyraclostrobin 1.6, 1.6ppm
- **Warning** in violation of Iowa code 206.11(3)(b): inconsistent with label.

#12.0032 → Mrs. Kim Kaiser, Hancock, vegetable garden, 7/26/11, 27 days

- Leaves were cupped with some yellowing, plants were stunted.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Roundup PowerMax, First Rate, Intensity-one, Radiate
- No cloransulam methyl or glyphosate residues detected in chemical analysis.
- **Notice of advisory** Iowa Admin Code Rule 21-45 26 (3)(206): application record was incomplete. Also some wind speed issues: climatologist recorded 3-12mph w/ gusts to 17mph, Applicator recorded 5-10mph.

#12.0049 → Charles Green, Conrad, family and employees, pasture, 8/2/11, 2 days

- Green and family were bailing straw, felt ill effects from the chemical spray.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline and Endigo ZC on 7/31/11
- Pyraclostrobin 0.78, 0.26ppm; lambda cyhalothrin 0.14ppm; thiamethoxam 0.074, 0.015ppm
- **Civil penalty of \$720** from President and Co-owner of Application Company for violations of Iowa Code 206.11(3)(d); other than label; 206.11(4)(d): careless or negligent; Iowa Code Rule 2-45.22(17): not submitting name of aerial applicator.

#12.0025 → Marvin Williams, New Providence, person, family, sweet corn, 7/22/11, 0 days

- Commercial Applicator flew directly over Williams' property causing drift exposure to him and family. Williams, Rosemary Williams, and sister (Mary Cook) were harvesting sweet corn, smelled and tasted chemical. Williams and sister felt ill effects (headache).
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline fungicide
- Pyraclostrobin: 0.043ppm
- President and Co-owner of Application Company: **civil penalty of \$700** for violation of Iowa Code 206.11(3)(b) and 206.11(4)(d).

#12.0059 → Don Obrecht, Harlan, property and vineyard, 8/5/11, 1 day

- Obrecht saw spraying, later noticed lightening, cupping, crinkling and saw-toothed pattern in leaves.
- Farmer Applicator was not aware of grapes in the area; Obrecht was not on Sensitive Crop Registry.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- CornBelt 4LB Lovol Ester to road ditch and fence line.
- No detectable residues of 2,4-D 2-ethylhexyl ester.
- **Advisory** given because of possible violation of 206.11(3)(d).

#12.0062 → Gary Guthrie, Nevada, organic vegetable farm, 8/8/11, 3 days

- Guthrie observed chemical spray drift settle on his organic vegetable gardens.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Quilt fungicide and Province insecticide
- Azoxystrobin 0.34, 0.37, 0.008ppm; propiconazole 0.21, 0.008, 0.17ppm; lambda cyhalothrin 0.33, 0.23, 0.20ppm
- Commercial Applicator given **Warning**: violation of 206.11(3)(b): inconsistent with label. Applicator wind speed reported 7mph; climatologist reported 5-12mph.
- Contractor given **Advisory**: violation of Iowa Code Rule 21-45.22(17)(b)(2): not submitting name of aerial applicator.

#12.0013 → Mark Hinders, Mitchell, grapes and trees, 7/14/2011, 40 days

- Noticed discoloration and some leaf curling on maples and some damage to grape vines.

Reading key for case file summaries on p. 2

- County: selective ditch spray of thistle
- Weed Commissioner (applicator) said did not spray Hinders' side of the road because property was on the no-spray list.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- ForeFront R&P herbicide
- 2,4-D, none detected
- **Official notice given on site** for other violations: expired license, improperly certified for commercial application.

#12.0046 → Loyd Johnson, Bloomin Wooley Acres, Nashua, 8/1/11, 1 day

- Johnson noticed heavy odor and taste of chemical.
- Pilot was aware of vegetable farm and possibly bees, so he was cautious; remembered wind from the southwest.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline Fungicide
- Pyraclostrobin: 0.81ng/in², 0.14ppm
- **Warning:** Iowa Code 206.11(3)(b): inconsistent with labeling and Iowa Admin Code Rule 21-45 26 (3)(206): not having customer's complete address.

#12.0500 → Jim Maranville, Clarinda, vineyard and property, 3/27/12, 0 days

- Maranville saw application, suspected drift due to winds.
- Farmer Applicator recorded wind (to the) northeast at 13mph; climatologist recorded south/southwest at 13-17 mph with gusts 19-25mph
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Authority XL, Roundup Powermax
- Chlorimuron-ethyl: none; glyphosate: 0.13ppm; sulfentrazone: 0.031ppm
- **Advisory:** violating Iowa Code 206.11(3)(b): inconsistent with labeling.

#12.0782 → Deborah Call, Albia, grapes, 6/5/13, 20 days

- Call noticed what appeared to be herbicide damage to grapes: leaf cupping, some curled and brown, some loss of foliage. Farm was listed on the Sensitive Crop Registry.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Matador, Roundup Power Max, Loveland Low Vol 6 Ester Weed Killer (to soybeans)
- Commercial Applicator recorded winds E/NE at 7mph; climatologist recorded calm. Temperature inversion may have occurred.
- 2,4-D ethylhexyl ester 1.2, 0.49, 0.19ppm; metolachlor and metribuzin none detected
- **Warning:** Violation of 206.11(3)(b): inconsistent with labeling.

#12.0644 → Shelly Skahill, Coin, property and vineyard, 5/10/12, 1-34 days

Reading key for case file summaries on p. 2

- Skahill was listed on Sensitive Crop Registry. . Noticed symptoms on 5/9/12 of light green leaves, some cupping and curling, some copper color, some wrinkling in leaves.
- Skahill applied Prowl H20, Chateau, Rely 280 on 4/11/12; on 4/23/12 applied Manzate Pro-Stick.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Commercial Applicator 1: 4/9/12, Verdict, Surestart, Cornerstone Plus to corn of Neighboring Farm 1 w/ winds NW 3-13, gusts to 19.
- Commercial Applicator 2: 5/2/12 and 5/8/12, applied Sharpen, Extreme, Abundit Extra to soybean of Neighboring Farm 2. Wind S 10-14, gusts to 18.
- Farmer Applicator 1: 4/6/12, Roundup Power Max, Authority First to soybeans w/ winds S/SE 11-17, gusts to 27.
- Commercial Applicator 3: 5/11/12, Durango DMA, Overtime ATZ, Hornet WDG, Atrazine 90DF to corn of Neighboring Farm 3. Wind calm, NW 5-9 gusts to 16.
- Farmer Applicator 2: 5/8/12, SureStart, Durango DMA to corn. Wind NW 6-12 gusts to 23.
- Glyphosate 0.13, 0.078, 0.11ppm; atrazine 0.14 ppm. Eight other chemicals tested were negative.
- Source of chemical residue could not be determined; **advisory given to all applicators** for violation of Iowa Code 206.11(3)(b): inconsistent with labeling.

#12.0568 → Kurt Uhlenhake, Ossain, yard and hayfield, 4/23/12, 0 days

- Uhlenhake smelled strong chemical odor and saw nearby field being treated.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Amine 4 2,4-D Weed Killer to corn; winds NW 6-17mph gusts to 24
- 2,4-D acid: 0.0070ppm
- **Warning** to Contractor in violation of Iowa Code 206.11(3)(b): inconsistent with labeling and Iowa Admin Code Rule 21-45 26 (3)(206): did not document spraying start and end times.

#12.0893 → Stan Staats, Wapello, property, oak, chestnut trees, 6/26/12, 1-84 days

- Organic chestnut tree orchard registered with the state. Damage to the trees noticed, forester said chemical damage. Tops brown and yellow; leaves yellow around the edges and cupped/curled on Chinese chestnut. Leaves on pawpaw bright green.
- Seven different applicators and/or farmers applied Roundup or other products containing glyphosate near the property between April-June 2012.
- Glyphosate 0.085, 0.048ppm; three other chemicals tested, none found.
- Source could not be determined, so **no apparent violations** were charged to any named persons.

#12.0864 → Rona Wyant, Fireside Winery, Marengo, vineyard, 6/17/12, 2 days

- Noticed phenoxy-type herbicide damage to grape vines. End of leaves were narrowed to a point and cupping/curling.
- Lime sulfur and Rely were applied to vineyard.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Roundup Weather Max, DuPont Assurell to beans; wind was recorded by Applicator as W 3-5mph, recorded by climatologist at 3-9mph.
- Application Company treated many fields around the vineyard, but Application Consultant suspected a certain application due to timing of complaint. Other sprayings were essentially disregarded.

Reading key for case file summaries on p. 2

- Glyphosate: 0.32, 0.26, 0.049, 0.035ppm
- **Warning:** Iowa Code 206.11(3)(b): inconsistent with labeling.

#12.0847 → Julie Keil, Oxford Junction, plants and trees, 5/25/12, 10 days

- Keil noticed problems with woodland perennials for market: some plants yellowing/brown. Others had lost vigor and/or died ("at this time there is no evidence that they ever existed" – Pesticide Bureau report). Other plants dying back quickly.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Extreme to soybeans; wind recorded by Applicator at SW 10mph, by climatologist at 10-18mph with gusts to 28mph.
- Glyphosate: none, none, 0.035ppm; imazethapyr: none
- **Warning** for violation of Iowa Code 206.11(3)(b): inconsistent with labeling.

#12.461 → Lloyd Holmes, Battle Creek, vineyard, 5/8/12, 4 days

- Holmes spoke to Farmer Applicator before he sprayed about the bad conditions, vineyard, etc. Holmes' son said Farmer Applicator sprayed anyway after Holmes left (but switched to ultra-low drift setting). The following morning some leaves cupped and curled.
- Holmes used Roundup PowerMax under 2 rows of vines in early April.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Gly Star Plus, Sonic, Low Vol 4 2,4-D to soybeans
- Glyphosate 0.82, 1.7ppm; sulfentrazone 0.014ppm; 2,4-D none
- Wind N/NE 19-21mph, gusts 24-31mph
- **Warning** for violation of Iowa Code 206.11(3)(b) inconsistent with labeling.

#12.0860 → Richard Martin, Boone, melon patch, 6/14/12, 7 days

- Martin has several truck gardens around Boone. Noticed brown leaf spots on watermelon leaves, muskmelon leaves, and cabbage.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Flexstar GT 3.5 to soybeans; winds calm
- Fomesafen none; glyphosate 0.055, 0.040ppm
- **Warning** for violation of Iowa Code 206.11(3)(b): inconsistent with labeling and Iowa Code 206.13: insurance for application company expired 1/1/12.

#13.0025 → Mike Swett, Ames, bee hives, 7/18/12, 1 day

- Brooks observed visible drift from aerial application and called Swett (Swett keeps bees on Brooks' property). Swett checked bees, some were flipping upside down, several were dead. Following morning thousands were dead outside the hives. Hives were on Sensitive Crop and Bee Registries.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Ground
- Headline Fungicide, Hero to corn
- Bifenthrin, metconazole, pyraclostrobin, zeta cypermethrin: none

- **No detectable residues** from hive swab, pollen, or honey frame.
- **No apparent violations** of Iowa Code.

#13.0048 → Kurt Uhlenhake, Ossian, farmyard and property, organic hayfield, 7/26/12, 2 days

- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Headline and Asana XL with a helicopter to corn on 7/24/12, wind SE at 12mph, gusts to 16mph
- All samples: pyraclostrobin 0.019, 4.9ppm, 44ng/in²; one sample esfenvalerate 4.9ppm
- **Warning** for violation of Iowa Code 206.11(3)(b): inconsistent with labeling and Iowa Admin Code Rule 21-45 26 (3)(206): incomplete address and omission of restricted pesticide used.

#13.0057 → Craig McCreary Toledo, organic corn and alfalfa, 7/30/12, 3 days

- McCreary saw spraying and tried to drive through his field but chemical odor was too strong and he got a headache. McCreary was not listed on (nor aware of) Sensitive Crop Registry.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Cobalt to soybeans
- Applicator recorded wind at 10mph; climatologist recorded 10-17mph, gusts to 20mph
- Chlorpyrifos 0.55, 1.6, 0.14ppm; gamma cyhalothrin 0.13, 0.31ppm
- **Warning** for violation of Iowa Code 206.11(3)(b): inconsistent with labeling and Iowa Admin Code Rule 21-45 26 (3)(206): for several items omitted on spray record.

#13.0055 → Rob and Tammy Faux, Tripoli, vegetables, poultry, bees, 7/30/12, 5 days

- Rob Faux was in the field and felt the mist on his person when the aircraft flew directly over the field. Faux farm is on Sensitive Crop Registry.
- *To access Applicator / Contractor / Subcontractor / Farmer information, contact Liz Kolbe at Practical Farmers of Iowa: liz@practicalfarmers.org (515) 232-5661.*
- Aerial
- Stratego, Sniper and Lorsban Advanced to soybeans
- Bifenthrin 6.8, 2.4, 2, 11, 6.3 ppm; chlorpyrifos 2.3, 5.6, 7.8, 4ppm; desthio prothioconazole 0.042, 0.17, 0.023, 0.54ppm; trifloxystrobin 7.8, 5.4, 7.6, 3.2, 2.6
- **Civil penalty of \$1,200**
- Violation of Iowa Code 206.11(3)(b): inconsistent with labeling and 206.11(3)(d): applying in a careless or negligent manner.
- Consultant in violation of 21-45.2(17): paid **civil penalty of \$260**; acted as consultant for Commercial Applicator but only met with him once.

The content of pages 17-19 are from the Iowa Pesticide Enforcement Response Policy. To obtain a full copy of the policy, contact the Pesticide Bureau at IDALS: (515) 281-8591 or pesticides@iowaAgriculture.gov.

Penalties and remedial actions enforced by IDALS for Iowa Code 206 violations are based on five criteria:

1. If the applicator holds a private or commercial license;
2. The level of risk posed to human public health;
3. The level of risk posed to environmental health;
4. Type of pesticide misused; and
5. Applicator's prior violations of Iowa Code 206.

The definitions in the table below are used in the grids on pages 18 and 19. The grid on page 18 is specific to private pesticide applicators (farmers applying to their own fields). Page 19 is specific to commercial applicators.

Iowa Pesticide Enforcement Response Policy -- Iowa Department of Agriculture and Land Stewardship (IDALS)
10-22-1986 revised August 17, 2006 -- Page 9 of 12

Health and Environmental Effects

Actual	Adverse effects to nontarget organisms or sites are established through sample analysis or other valid basis (e.g. medical and/or veterinary reports, expert testimony)
Potential	Adverse effects to nontarget sites or organisms are not known to exist. However, analysis reveals a level of residues at the nontarget site which could be reasonably expected to cause adverse effects based upon exposure circumstances
Unknown	Adverse effects not known to exist and the level of contamination at the nontarget site would not be expected to cause unreasonable adverse effects based upon exposure circumstances.
None	Adverse effects do not exist.

There may be times when a higher or lower level of enforcement response is believed appropriate based upon extent of damage, culpability, and remedial action. When those factors are used to deviate from the response determined through use of one of the tables it must be fully justified in the case file.

The enforcement response for a second offense may be stronger than for a similar first offense. State law will determine when repeat violations are to be considered as first or second offenses.

Use Violations -- Enforcement Guidance Grid -- Commercial Applicators
 (Includes Applicators Not Under Direct Supervision)

May 19, 2006

Public Health Effects	Type of Pesticide				General Use			Offense
	Suspended or Banned	RUP, EUP, Sect 18/24c, Canceled -or- WPS NonCompliance	Environmental Effects		Actual	Potential	Unknown	
Actual	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	1st
Potential	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	2nd
Unknown	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	1st
None	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	Warning Letter	2nd

Warning Letter
 Civil Penalty, Informal Hearing, Settlement Conference
 RIA/G, Formal Hearing, County Attorney
 REPA, Suspension, Cancellation, Revocation

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8/17/2006

Attachment 2