A Summary of Cases

June 19, 2020

PS19-0167 On May 3, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report an unknown pest management professional, possibly from Illinois, treated his duplex with a pesticide for the control of mold. The mold is still there, and the complainant does not believe the pest management professional is licensed.

Disposition:
A. Keith Hettich was cited for two (2) counts of violation of section 65(9) of the Indiana Pesticide Use and Application Law for applying pesticides for-hire without having an Indiana pesticide business license. A civil penalty in the amount of $500.00 (2 counts x $250.00 per count) was assessed. However, the civil penalty was reduced to $375.00. Consideration was given to the fact Keith Hettich cooperated during the investigation.
B. As of November 26, 2019, Keith Hettich had not paid the $375.00 civil penalty assessed.
A second letter was sent as a reminder the civil penalty was still owed to OISC.
C. As of February 4, 2020, Keith Hettich had not paid the $375.00 civil penalty assessed. The case was forwarded to collections for the unmitigated civil penalty amount of $500.00.

PS19-0169 On May 6, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report Jesse Lantz was making for-hire pesticide applications without being licensed. OISC database indicated Jesse Lantz was certified in category 7a but not licensed.

Disposition:
A. Jesse Lantz was cited for thirteen (13) counts of violation of section 65(9) of the Indiana Pesticide Use and Application Law for applying pesticides for hire without having an Indiana pesticide business license. A civil penalty in the amount of $3,250.00 (13 counts x $250.00 per count) was assessed. However, the civil penalty was reduced to $1,625.00. Consideration was given to the fact Jesse Lantz cooperated during the investigation and corrective action was taken.
B. As of November 26, 2019, Jesse Lantz had not paid the $1,625.00 civil penalty assessed. A second letter was sent as a reminder the civil penalty is still owed to OISC.
C. On December 17, 2019, OISC received the November 26, 2019, mail back marked "attempted - not known - unable to forward". Kevin Gibson spoke to Jesse Lantz by phone and he stated he had not received any mail from OISC to date. Kevin Gibson verified his address and it is different from the address we sent mail. We sent a new letter with copies of all previous correspondence and the case summary to Jesse Lantz using the Fulton Street address.
D. The civil penalty payment was received in January 2020.

PS19-0174 On May 13, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report he observed a pesticide application being made to the field approximately 200 feet east of his property on May 8, 2019 between the hours of approximately 11:00 am and 1:00 pm. He stated the wind speed, according to WLFI TV, was 14 mph directly out of the east. Complainant stated he has numerous trees and several raspberry plants that were affected.

Disposition: Craig Gamble and Raub Farms were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact no restricted use pesticides were involved. Consideration was also given to the fact this was Mr. Gamble's third violation of similar nature. See case numbers 2017/1008 & 2017/1009).

PS19-0180 On May 14, 2019, the complainant Loren Wagler contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report agricultural drift to his garden. The complainant stated the injury to his garden was caused by an application of Gramoxone and 2,4-D made by White River Coop on the evening of May 8, 2019, when the wind was blowing 30 miles per hour.

Disposition: Tim Miller and White River Coop were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact Mr. Miller cooperated during the investigation. Consideration was also given to the fact a restricted use pesticide was involved. Tim Miller and White River Coop were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2 for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity as to cause harm to a non-target site.

PS19-0192 On May 20, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report individuals were spraying the field west of their property on Wednesday, May 15. They have since noticed damaged leaves on Saturday, May 18.

Disposition: Thomas McCord and Ceres Solutions, LLP were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift to a non-target site. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Mr. McCord's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved. Thomas McCord and Ceres Solutions, LLP were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site.

PS19-0193 On May 20, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that the local farmer sprayed a neighboring farm field and now they have pesticide exposure symptoms to their grapes, raspberries and strawberries.

Disposition: Thomas Spreen was cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was Mr. Spreen's first violation. Consideration was also given to the fact a restricted use pesticide was involved.

PS19-0205 On May 24, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that about two weeks ago, Crop Production Services made a pesticide application to a neighboring farm field that has adversely affected his trees.

Disposition:
A. Bart Barnett was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $1,000.00 was assessed for this violation. Consideration was given to the fact this was his sixth (6th) violation of similar nature. See case numbers 2017/0971, 2017/1188, 2017/1208, 2018/0884 and 2018/1038. Consideration was also given to the fact no restricted use pesticides were involved in this investigation.
B. As of November 26, 2019, Nutrien Ag Solutions had not paid the $1,000.00 civil penalty assessed. A second letter was sent as a reminder the civil penalty is still owed to OISC.
C. As of January 14, 2020, Nutrien Ag Solutions had not paid the civil penalty assessed. The case was forwarded to the Indiana Attorney General for collection. See PS20-0054 for details regarding the suspension of licenses for non-payment of this civil penalty.
D. On February 10, 2020, OISC received the $1,000.00 civil penalty from Nutrien Ag Solutions. OISC terminated the collection process and the license suspension.

PS19-0225 On June 6, 2019, OISC Agent Sarah Caffery and I performed a routine marketplace inspection at Target located at 3630 E. South Street, Lafayette, Indiana. I spoke with a customer service representative and informed her of the process of the marketplace inspection. She explained that Bob Metz would be the employee in charge that I would need to speak with. She radioed for Mr. Metz explaining the scope of the inspection and he responded saying that we could go ahead and do the inspection and he would meet with us when we were finished. I then issued a Notice of Inspection.

Disposition:
A. On June 12, 2019, a label review was requested from the Pesticide Product Registration Specialist.

B. As a result of the investigation and label review: a. Target was warned for violation of section 57(1) of the Indiana Pesticide Registration Law for offering for sale a pesticide product that was not registered for sale in the state of Indiana.
C. KAS Direct LLC was cited for violation of section 57(1) of the Indiana Pesticide Registration Law for distributing a pesticide product that was not registered for sale in the state of Indiana. A civil penalty in the amount of $250.00 was assessed for this violation. However, the civil penalty will be held in abeyance and not assessed provided KAS Direct LLC properly registers the pesticide product within thirty (30) days from receipt of this notice.
D. On November 13, 2019, Compliance was notified that the registration request was denied by the Pesticide Product Registration Specialist and KAS Direct LLC will not continue with the registration process. The civil penalty in the amount of $250.00 was reassessed.
E. On November 15, 2019, the Action Order issued to Target was released.
F. On January 16, 2020, OISC received payment for the $250.00 civil penalty.

PS19-0264 On June 25, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that on June 14, 2019, Troy Wolfe made a dicamba application to a neighboring field north of his and did not leave a buffer. The complainant stated the winds were 18 to 25 mph at the time.

Disposition: Troy Wolfe was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was his first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

PS19-0280 On July 2, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a pesticide application was made to a field in the area of CR300 East and CR400 South in Randolph County that has adversely affected his tomatoes.

Disposition: Brian Mote and Mote Farm Service were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Brian Mote's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.
Brian Mote and Mote Farm Service were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site.

PS19-0319 On July 8, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a neighboring farmer made a herbicide application to a farm field and now he has pesticide exposure symptoms to his trees.

Disposition: David Rasnic and Ceres Solutions Cooperative Inc. were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Mr. Rasnic's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

PS19-0333 On July 10, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report about three or four weeks ago one of the Mercer Landmarks made a pesticide application to a neighboring farm fields that adversely affected his entire property.

Disposition: Todd Siegrist and Mercer Landmark Inc. were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Mr. Siegrist's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved. Todd Siegrist and Mercer Landmark Inc. were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site.

PS19-0359 On July 18, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that Ridenour Farms applied dicamba to a field of dicamba-tolerant (DT) soybeans which drifted onto his Liberty Link beans.

Disposition: Matthew Ridenour was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was Mr. Ridenour's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

PS19-0409 On July 26, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a dicamba application made to a neighboring farm field drifted onto his Liberty Link soybeans.

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.

PS19-0453 On August 5, 2019, the complainant contacted the Compliance Officer of the Office of

Indiana State Chemist (OISC) to report that a dicamba application to a neighboring field has adversely affected his non-DT beans.

Disposition: Ryan James Allbaugh was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was his first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

PS19-0466 On August 7, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a dicamba application made to a neighboring farm field drifted onto his Liberty Link soybeans.

Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.

PS19-0483 On August 9, 2019, Matt Moorman contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that Mark Glessner sprayed dicamba on a neighboring farm field that it drifted onto Roundup Ready soybeans.

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.

PS19-0493 On August 12, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a neighboring farmer applied dicamba to a field that drifted onto his non dicamba-tolerant (DT) soybeans.

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.

PS19-0511 On August 14, 2019, the complainant contacted the Compliance Officer of the Office of

Indiana State Chemist (OISC) to report that the local farmer made a pesticide application to a field that has drifted onto his ornamentals.

Disposition: Based on the evidence collected in this investigation, it has been determined that Roy Rulon failed to comply with the drift management restrictions on the label for the herbicides Durango and Amine 400. It should also be noted that OISC was not able to determine whether the herbicide moved off-target as the result of drift, application into an inversion, or volatilization at some point after the application, and was not able to clearly identify the source of the off-target movement. Roy Rulon was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was his second violation of similar nature. See case number 2017/0803.

PS19-0586 On August 5, 2019, Agent Joe Becovitz, Sarah Caffery and I performed a routine Producer Establishment Inspection (PEI) at Orion Safety Products in Peru, IN. A Notice of Inspection was issued and state credentials were presented to Rod Utter, General Manager. I explained that this was a routine not-for-cause inspection and that I would be inspecting repackaging agreements, inbound, production and distribution records, bin labels and any product that was packaged, labeled and ready for shipment.

Disposition: Orion Safety Products was cited for five (5) counts of violation of section 57(1) of the Indiana Pesticide Registration Law for distributing pesticide products that were not registered for distribution in the state of Indiana. A civil penalty in the amount of $1,250.00 (5 counts x $250.00 per count) was assessed. Orion Safety Products was cited for five (5) counts of violation of section 57(5) of the Indiana Pesticide Registration Law for distributing pesticide products that were misbranded. A civil penalty in the amount of $1,250.00 (5 counts x $250.00 per count) was assessed. The total amount of civil penalty assessed in this investigation is $2,500.00. However, the civil penalty was reduced to $876.00. Consideration was given to the fact Orion Safety Products cooperated during the investigation; there was no previous history of similar nature; no potential for harm and a good-faith effort to comply.

PS20-0037 On August 5, 2019, Agent Joe Becovitz, Sarah Caffery and I performed a routine Producer Establishment Inspection (PEI) at Orion Safety Products in Peru, IN. A Notice of Inspection was issued and state credentials were presented to Rod Utter, General Manager. I explained that this was a routine not-for-cause inspection and that I would be inspecting repackaging agreements, inbound, production and distribution records, bin labels and any product that was packaged, labeled and ready for shipment.

Disposition: Woodstream Corp was cited for violation of section 57(5) of the Indiana Pesticide Registration Law for distributing a pesticide product that is misbranded. A civil penalty in the amount of $250.00 was assessed for this violation.

CASE SUMMARY

Case #PS19-0167

Complainant: Brian Alton
3380 East Warren Circle
Vincennes, Indiana 47591

Respondent: Keith Hettich — Unlicensed Applicator
Keith Hettich Construction — Unlicensed Business
15084 Lake Lawrence Road
Lawrenceville, Illinois 62439

1. On May 3, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report an unknown pest management professional, possibly from Illinois, treated his duplex with a pesticide for the control of mold. The mold is still there and the complainant does not believe the pest management professional is licensed.

2. On May 6, 2019, I contacted the complainant Brian Alton via telephone. Mr. Alton stated he lives in a duplex and in July 2018 his neighbor had to have the cable company come out and the cable company employee had to go into the crawl space of the duplex. The cable company employee advised Mr. Alton's neighbor there was mold in the crawl space. Mr. Alton's neighbor contacted their landlord and advised the landlord of the mold in the crawlspace. Mr. Alton stated his landlord Beth Meeks hired someone to come and treat the mold.

3. Mr. Alton stated in April 2019, Mr. Alton's neighbor again had the cable company come out and the cable company employee advised Mr. Alton's neighbor there was still mold in the crawl space. Mr. Alton's neighbor again contacted their landlord Beth Meeks who again sent someone out to treat the mold. Mr. Alton advised his landlord Beth Meeks advised him there was no mold in the crawl space.

4. On May 6, 2019, I contacted Mr. Alton's landlord Beth Meeks via telephone. I advised Ms. Meeks I was a Pesticide Investigator with OISC and the complaint I was investigating. Ms. Meeks stated she hires Keith Hettich to do maintenance work on her rental properties. Ms. Meeks stated Mr. Hettich treated the mold in the crawl space of the duplex. Ms. Meeks advised she would have Mr. Hettich contact me via telephone.

5. On May 6, 2019, Keith Hettich contacted me via telephone. I advised Mr. Hettich I was a Pesticide Investigator with OISC and the complaint I was investigating. Mr. Hettich stated he used a product he purchased at Lowes called Mold Control to treat the mold in the crawl space in July 2018. I advised Mr. Hettich to meet with me at Mr. Alton's residence the following day to discuss the mold treatment application.

6. On May 7, 2019, I met with the Brian Alton at his residence located at 3380 East Warren Circle in Vincennes, Indiana. Mr. Alton showed me the crawl space access inside his duplex.

I entered the crawl space access and observed wet conditions in the corner where the crawl space access point was located. Further, on the block wall, I observed black spots and on one floor joist I observed a white substance (See Fig. 1 and 2). The duplex shares one crawl space.

Fig. 1

Fig. 2

- Fig. 1 is the corner of the crawl space on Mr. Alton's side of the duplex showing black spots on the block wall and a white substance on one of the floor joist.

- Fig. 2 is looking down into the crawl space from Mr. Alton's crawl space access point showing wet conditions in the crawl space.

7. On May 7, 2019, I met with Beth Meeks and Keith Hettich at Mr. Alton's residence. Mr. Hettich stated he purchased a 1-gallon container of Mold Control from Lowes. I showed Mr. Hettich a picture of *Concrobium Mold Control, EPA Reg. #82552-1, Active Ingredient = Sodium Carbonate* and he confirmed it was the pesticide he used (See Fig. 3). Mr. Hettich stated sometime in July 2018 he was not sure of the exact date; he used a 1-gallon hand pump sprayer to apply *Concrobium Mold Control, EPA Reg. #82552-1, Active Ingredient = Sodium Carbonate* to the floor joist in the duplex. Mr. Hettich stated he made another application of *Concrobium Mold Control, EPA Reg. #82552-1, Active Ingredient = Sodium Carbonate* to the floor joist seven days later.

8. I asked Mr. Hettich if he had a pesticide business license and pesticide applicators license issued from OISC. Mr. Hettich stated he was not licensed through OISC. I advised Mr. Hettich in order to make for hire pesticide applications in Indiana he needed to obtain a pesticide business license in the proper category. Hettich stated this was the first time he has made a pesticide application and he was not going to do it again.

9. According to the label for *Concrobium Mold Control, EPA Reg. #82552-1, Active Ingredient = Sodium Carbonate* Mr. Hettich made a proper application of the pesticide.

Fig. 3

- Fig. 3 is the picture of *Concrobium Mold Control, EPA Reg. #82552-1, Active Ingredient = Sodium Carbonate* I showed Mr. Hettich to confirm he used this particular product.

10. The evidence in this case indicates Mr. Hettich of Keith Hettich Construction made two for hire pesticide applications seven days apart in July 2018 of *Concrobium Mold Control, EPA Reg. #82552-1, Active Ingredient = Sodium Carbonate* without having a pesticide business license.

Nathan J. Davis
Investigator

Date: May 10, 2019

Disposition:

A. Keith Hettich was cited for two (2) counts of violation of section 65(9) of the Indiana Pesticide Use and Application Law for applying pesticides for-hire without having an Indiana pesticide business license. A civil penalty in the amount of $500.00 (2 counts x $250.00 per count) was assessed. However, the civil penalty was reduced to $375.00. Consideration was given to the fact Keith Hettich cooperated during the investigation.

B. As of November 26, 2019, Keith Hettich had not paid the $375.00 civil penalty assessed. A second letter was sent as a reminder the civil penalty was still owed to OISC.

C. As of February 4, 2020, Keith Hettich had not paid the $375.00 civil penalty assessed. The case was forwarded to collections for the unmitigated civil penalty amount of $500.00.

George N. Saxton
Compliance Officer

Draft Date: November 26, 2019
Case Closed: February 4, 2020

CASE SUMMARY

Case #PS19-0169

Complainant: Roger Ralph Shipley
P.O. Box 813
Goshen, Indiana 46527-0813

Respondent: Jesse Lantz
1633 Fulton Street
Elkhart, Indiana 46514

1. On May 6, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report Jesse Lantz was making for-hire pesticide applications without being licensed. OISC database indicated Jesse Lantz was certified in category 7a but not licensed.

2. On May 14, 2019, I met with Jesse Lantz. I told him of the complaint against him. Mr. Lantz admitted he made some pesticide applications since leaving the employment of R S Pest Incorporated in Goshen Indiana. He told me he was licensed and therefore he believed he was able to make the applications with no problems. I explained he needed to make pesticide applications while attached to a pesticide business. At the current time, Mr. Lantz was not attached to a pesticide business and therefore in violation for every pesticide application he made since leaving R S Pest Incorporated.

3. Mr. Lantz told me his "accounting" system was somewhat antiquated but he could supply me with names, dates and product used. However, he did not have the addresses but assured me all applications were made in Indiana.

4. I issued Mr. Lantz an "Action Order" which stated, "*cease all pesticide applications until properly licensed by the Office of Indiana State Chemist*"

5. Mr. Lantz told me he made applications of Demand CS (EPA #100-1066; active ingredient: lambda-cyhalothrin) on the following dates:

July 19, 2018	September 2, 2018	October 24, 2018
October 25, 2018	November 12, 2018	November 24, 2018
December 13, 2018	December 29, 2018	April 16, 2019
April 19, 2019	April 29, 2019	May 6, 2019
May 11, 2019		

6. After reviewing all available information, Mr. Lantz is in violation for making (13) pesticide applications without a proper pesticide business license.

Kevin W. Gibson
OISC Investigator

Date: July 3, 2019

Disposition:

A. Jesse Lantz was cited for thirteen (13) counts of violation of section 65(9) of the Indiana Pesticide Use and Application Law for applying pesticides for hire without having an Indiana pesticide business license. A civil penalty in the amount of $3,250.00 (13 counts x $250.00 per count) was assessed. However, the civil penalty was reduced to $1,625.00. Consideration was given to the fact Jesse Lantz cooperated during the investigation and corrective action was taken.

B. As of November 26, 2019, Jesse Lantz had not paid the $1,625.00 civil penalty assessed. A second letter was sent as a reminder the civil penalty is still owed to OISC.

C. On December 17, 2019, OISC received the November 26, 2019, mail back marked "attempted - not known - unable to forward". Kevin Gibson spoke to Jesse Lantz by phone and he stated he had not received any mail from OISC to date. Kevin Gibson verified his address and it is different from the address we sent mail. We sent a new letter with copies of all previous correspondence and the case summary to Jesse Lantz using the Fulton Street address.

D. The civil penalty payment was received in January 2020.

George N. Saxton
Compliance Officer

Draft Date: December 17, 2019
Case Closed: February 3, 2020

CASE SUMMARY

Case #PS19-0174

Complainant: Robert Miller
6531 West 800 South
West Point, IN 47992

Respondent: Craig Gamble — Private Applicator
Raub Farms
7707 South 475 West
Lafayette, IN 47909

1. On May 13, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report he observed a pesticide application being made to the field approximately 200 feet east of his property on May 8, 2019 between the hours of approximately 11:00 am and 1:00 pm. He stated the wind speed, according to WLFI TV, was 14 mph directly out of the east. Complainant stated he has numerous trees and several raspberry plants that were affected.

2. On May 20, 2019, I met with Robert Miller at his residence. I had him show me the vegetation he believed was injured by pesticide drift. I noticed that the injured vegetation had cupped/curled leaves and twisted petioles. There were also reddish-orange specks on the leaves. The injury could be seen over the majority of Mr. Miller's property. The target field can be seen from Mr. Miller's property in Figure 1. The injury that caused Mr. Miller's complaint can be seen in Figures 2 and 3.


Figure 1


Figure 2


Figure 3

3. I collected the following samples:
   A. East Side Veg.
   B. Middle Veg.
   C. West Side Veg
   D. Target Field Veg (Weeds)
   E. Target Field Soil
   F. Control (Veg.)

   These samples were submitted to the OISC residue lab for analysis. I also collected a sample of vegetation to submit for analysis by the Plant and Pest Diagnostic Lab at Purdue (PPDL). The location of these samples can be seen in Figure 4.

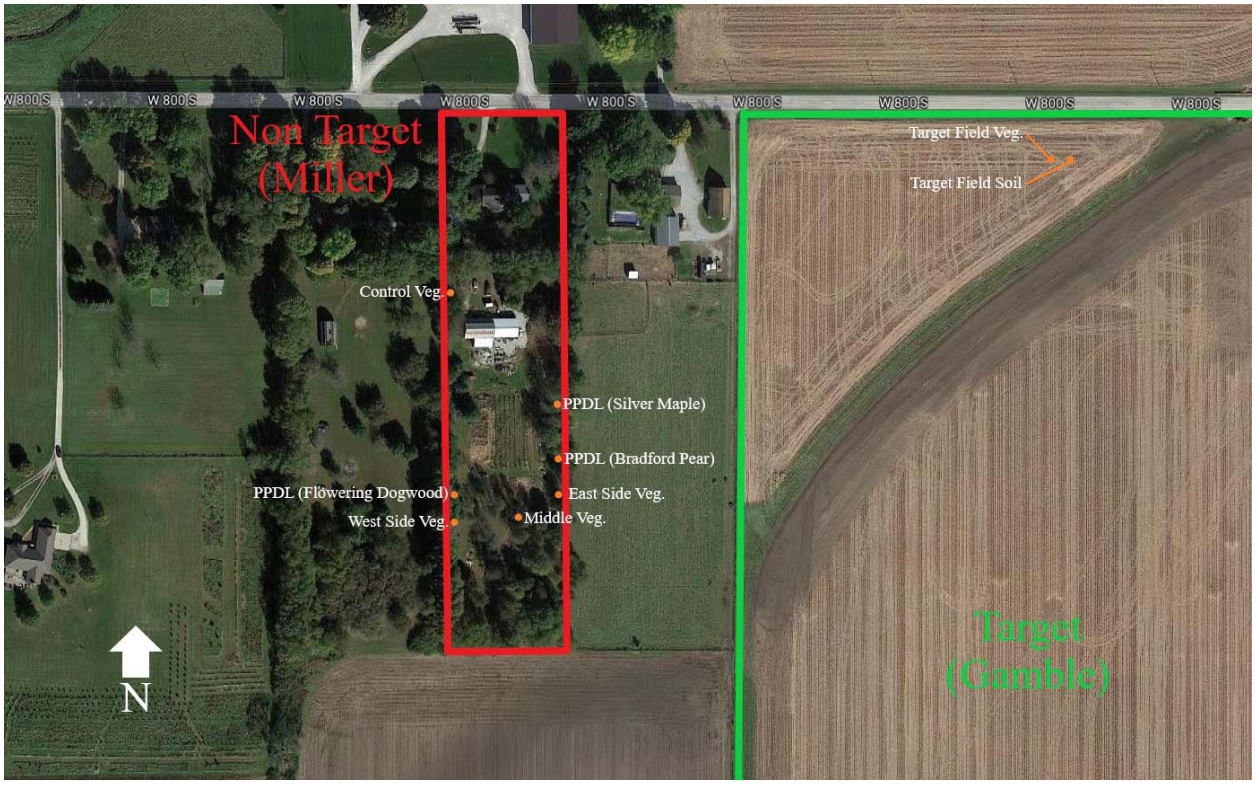


Figure 4

4. On May 23, 2019, I received a Pesticide Investigation Inquiry (PII) from Justin Raub. It stated that Craig Gamble made an application on May 8, 2019 from 10:54 AM to 2:00 PM. The application consisted of:

   A. Lo-Vol 2,4-D (EPA Reg. #42750-20-55467, active ingredient 2,4-D)
   B. Valor SX (EPA Reg. #59639-99, active ingredient flumioxazin)
   C. Durango DMA (EPA Reg. #62719-556, active ingredient glyphosate)
   D. Actamaster Soluble Crystal Spray Adjuvant (ammonium sulfate)

   The wind data reported on the PII was 10 MPH from the east at the beginning of the application and 12-13 MPH from the east at the end of the application. This means that the wind was blowing towards the complainant's property during the application.

5. I collected wind data from the Purdue University Airport (KLAF) which is 9.7 miles from the target field, Frankfort Municipal Airport (KFKR) which is 24.4 miles from the target field, and Crawfordsville Municipal Airport (KCFJ) which is 22.5 miles from the target field. The data from these weather stations is as follows:

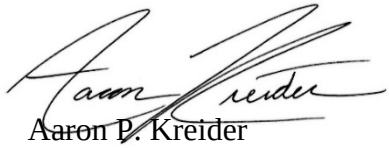
   A. KLAF: 14 MPH with no gusts from the east at the start of the application. 13-15 MPH with gusts 0-26 MPH from the east during the application. 15 MPH with gusts of 26 MPH from the east at the end of the application
   B. KFKR: 17 MPH with no gusts from the southeast at the start of the application. 12-18 MPH with gusts 0-25 MPH from the east-southeast during the application. 16 MPH with no gusts from the southeast at the end of the application.
   C. KCFJ: 15 MPH with no gusts from the east at the start of the application. 10-16 MPH with gusts 0-20 MPH from the east-southeast during the application. 12 MPH with no gusts from the southeast at the end of the application.

6. The report from PPDL stated, "*Mixed plant material in sample 19-00417 showed symptoms (epinasty and necrotic spots) that are characteristic of exposure to synthetic auxin herbicide (group 4 herbicides such as 2,4-D) and PPO-inhibiting herbicides (group 14 herbicides such as flumioxazin), respectively.*

7. The lab results from the OISC residue lab are as follows:

OCM Collection #	**91861**	**Case #**	**PS19-0174**	**Investigator**	**A. Kreider**		
Sample #	Sample Description			Matrix	Amount of Analyte (ppb)		
					2,4-D	**Glyphosate**	**AMPA**
19-4-1431-8	Vegetation, grab/spot, east side veg, affected site			Veg	381	52.7	BDL
19-4-1432-5	Vegetation, grab/spot, middle veg, affected site			Veg	396	298	BDL
19-4-1433-9	Vegetation, grab/spot, west side veg, affected site			Veg	346	35.1	BDL
19-4-1434-1	Vegetation, grab/spot, target field veg, target site			Veg	15300	4730	BQL
19-4-1435-6	Soil, grab/spot, target field soil, target site			Soil	N/A	N/A	N/A
19-4-1436-0	Vegetation, grab/spot, control (veg), affected site			Veg	298	BDL	BDL
PPM= Parts Per Million; PPB=Parts Per Billion; CONF=Confirmed; LOQ=Limit of Quantitation; BDL=Below detection Limits: this analyte was not detected using the standard analytical methods employed by OISC; BQL=Below quantification limits: this analyte was detected however the amount was lower than the quantification limit established using the standard analytical methods employed by OISC N/A = Not Analyzed							
LOQ (ppb)				Veg	0.3 – 0.7	10	50
LOQ (ppb)				Soil	N/A	N/A	N/A
Signature					**Date**	07/30/2019	

8. Based on the results from the OISC residue lab and PPDL, site observations, and wind data, Mr. Gamble's application violated the Indiana Drift Rule.



Aaron P. Kreider — Date: December 10, 2019
Investigator

Disposition: Craig Gamble and Raub Farms were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact no restricted use pesticides were involved. Consideration was also given to the fact this was Mr. Gamble's third violation of similar nature. See case numbers 2017/1008 & 2017/1009).

George N. Saxton — Draft Date: January 22, 2020
Compliance Officer — Case Closed: February 17, 2020

CASE SUMMARY

Case #PS19-0180

Complainant: Loren Wagler
6012 E 550 N
Montgomery, IN 47558

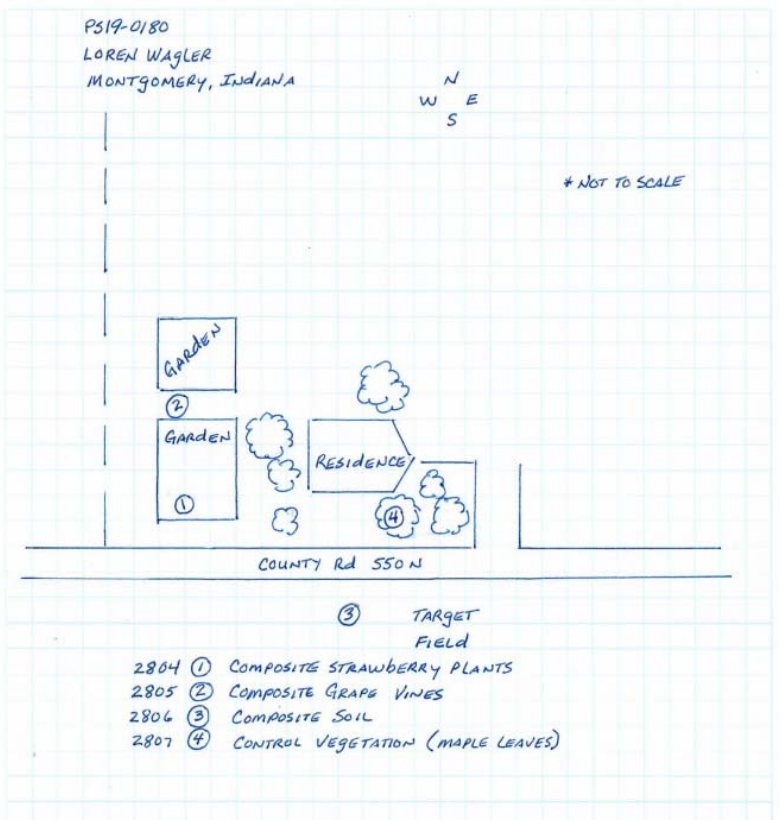
Respondent: White River Coop
Tim Miller **Licensed Applicator**
5638 E 1400 N
Elnora, IN 47529

1. On May 14, 2019, the complainant Loren Wagler contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report agricultural drift to his garden. The complainant stated the injury to his garden was caused by an application of Gramoxone and 2,4-D made by White River Coop on the evening of May 8, 2019, when the wind was blowing 30 miles per hour.

2. On May 16, 2019, I met with the complainant Loren Wagler. I checked the complainant's property. I found various places where it appeared to have growth regulator exposure symptoms. (see photos below) I obtained vegetation samples of tomato plants, strawberry plants and grape vines for submission to Purdue Plant and Pesticide Diagnostic Lab (PPPDL) for analysis.

3. I placed the following environmental samples in Mylar bags for submission to the OISC Residue Lab for analysis (see diagram below):

2804	composite strawberry plants	2805	composite grape vine leaves
2806	composite soil (target field)	2807	control vegetation (maples leaves)



4. I made contact with White River Coop located in Elnora Indiana. Applicator Tim Miller agreed to complete and return a Pesticide Investigation Inquiry (PII) concerning the pesticide application to the neighboring farm field.

5. I received the following information from PPPDL: "*The tomato and grape plants in sample 19-00399 show moderate injury symptoms (epinasty, stem twisting and callous tissue formation) that are characteristic of exposure to synthetic auxin herbicides (group 4) such as 2, 4-D. Tomatoes and grapes are extremely sensitive to very low rates or auxin herbicides. Strawberry plants show light injury levels that are characteristic of auxin injury as well. No herbicide injury symptoms in these plant samples can be associated with exposure to gramoxone (paraquat). This suggest that if the 2, 4-D and gramoxone were sprayed together, the 2, 4-D may have volatilized instead of primary drift incident*". "*There was no evidence of significant disease or insect damage on the samples*".

6. I received a completed PII from applicator Tim Miller. According to the PII, Mr. Miller made a pesticide application of **Gramoxone** (EPA #100-1431; active ingredient: paraquat) and **Shredder 2, 4-D LV6** (EPA #1381-250; active ingredient: 2, 4-D) on May 8, 2019 between 6:15 pm and 7:00pm. He recorded the wind at 10-15 miles per hour blowing in a northwest direction toward the complainant's property. He also reported a 90-foot downwind buffer from the complainant's property.

7. The weather data I obtained from www.wunderground.com confirmed the weather information provided by Mr. Miller. According to the weather data from Lawrenceville, Illinois (33 miles west) for May 8, 2019, the wind was blowing 12-16 miles per hour in a north to northwest direction toward the complainant's property at the time of application.

8. I checked the Gramoxone and Shredder 2, 4-D LV6 labels for wind information at time of application. The label for Shredder 2, 4-D LV6 reads in part, "*Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for non-target species, non-target crops) within 250 feet downwind"*.

9. The Gramoxone label states, *"Sensitive Areas, The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (i.e. when wind is blowing away from the sensitive area."*

10. It should be noted the label for Shredder 2, 4-D LV6 specifically states "*sensitive areas within 250 feet downwind*". I checked the distance between the complainant's property and the field in question. I measured the distance at 30 feet of road. Including the 90-foot buffer used by the applicator at time of application and the 30 feet of road between the complainant's property and the field, the total distance is 120 feet.

11. Based on available information (site observations, PPPDL report, PII information and weather data), Mr. Tim Miller was in violation of the Shredder LV6 label by applying it when the wind direction did not favor on-target deposition and the complainant's property was within 250 feet downwind.

Kevin W. Gibson — Date: December 6, 2019
Investigator

Disposition: Tim Miller and White River Coop were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact Mr. Miller cooperated during the investigation. Consideration was also given to the fact a restricted use pesticide was involved.

Tim Miller and White River Coop were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2 for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity as to cause harm to a non-target site.

George N. Saxton — Draft Date: January 13, 2020
Compliance Officer — Case Closed: February 17, 2020

CASE SUMMARY

Case #PS19-0192

Complainant: Jason McClure
3152 West 450 North
Peru, Indiana 46970

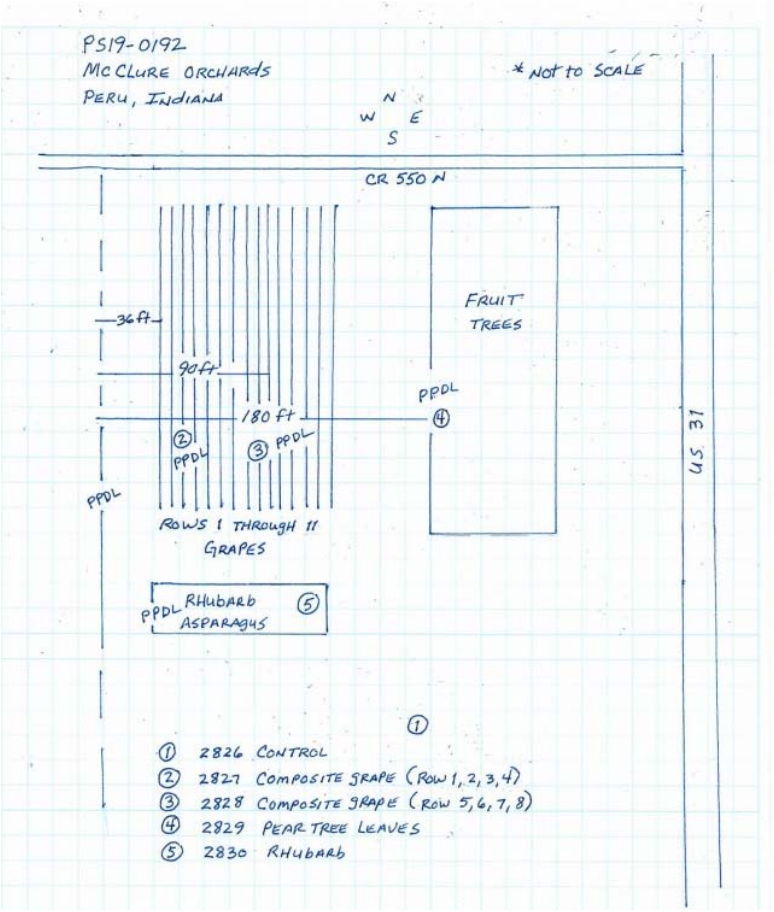
Respondent: Ceres Solutions, LLP
Thomas McCord **Licensed Applicator**
6519 South SR 19
Peru, Indiana 46970

1. On May 20, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report individuals were spraying the field west of their property on Wednesday, May 15. They have since noticed damaged leaves on Saturday, May 18.

2. On May 23, 2019, I met with the complainant Jason McClure. Mr. McClure told me he checked his grape vines a few days after a pesticide application was made to a farm field west of his vineyard. He said he noticed herbicide exposure symptoms. I checked the grape vines and the pear trees to the east of the grape vines. In both cases, the leaves exhibited cupping, strapping and puckering which were signs of exposure to growth regulators. I obtained vegetation samples of grape leaves, pear tree leaves and rhubarb leaves for submission to Purdue Plant and Pest Diagnostic Lab (PPPDL) for analysis. (see photos below):

3. I placed the following environmental samples in Mylar bags for submission to the OISC Residue Lab for analysis (see diagram below):

2826	control vegetation	2827	composite grape leaves (rows 1, 2, 3, 4)
2829	pear tree leaves	2828	composite grape leaves (rows 5, 6, 7, 8)
2830	rhubarb leaves		



4. I learned applicator Thomas McCord of Ceres Solutions located in Peru Indiana made the pesticide application to the field west of McClure's vineyard. Mr. McCord agreed to complete and return a Pesticide Investigation Inquiry (PII) concerning the pesticide application to the field in question.

5. I received the following information from PPPDL: "*The grape plants in sample 19-00463 show injury symptoms (epinasty and leaf strapping) that are characteristic of exposure to synthetic auxin herbicides such as 2, 4-D. Grapes are highly sensitive to 2, 4-D and can display injury symptoms at very low exposure levels. The tree/shrub sample shows epinasty and interveinal necrosis. These symptoms are characteristic of exposure to synthetic auxin (2, 4-D) and Photosystem II inhibitor (atrazine) herbicides, respectfully. The rhubarb plant was observed to have some leaf spotting which we wanted to incubate to rule out pathogen. No pathogens were observed associated with the leaf spots. Spotting on other plants does not appear to be disease related*."

6. I received a completed PII from applicator Thomas McCord. According to the PII, Mr. McCord made a pesticide application of:

    a. **Cornerstone Plus 5** (EPA #1381-241; active ingredient: glyphosate);
    b. **Harness Xtra 5.6L** (EPA #524-485; active ingredient: atrazine and acetochlor); and
    c. **Shredder 2, 4-D LV6** (EPA #1381-250; active ingredient: 2, 4-D);

    on May 15, 2019 between 5:03pm and 8:44pm. He recorded the wind blowing at 6 miles per hour in a northeasterly direction toward the complainant's property.

7. The weather data I obtained from www.wunderground confirmed the weather information provided by Mr. McCord. According to the weather data from Fort Wayne International Airport (57 miles northeast) for May 15, 2019, the wind was blowing 7-13 miles per hour in an east to northeasterly direction toward the complainant's property at the time of application.

8. I checked the labels for Cornerstone Plus 5, Harness Xtra 5.6L and Shredder 2, 4-D LV6. The label for **Shredder 2, 4-D LV6** reads in part, *"Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including but not limited to, residential areas, bodies of water, known habitat for non-target species, non-target crops) within 250 feet downwind"*. The complainant's grapes were approximately 35-40 feet from the target field which was well within the 250 feet downwind stated on the Shredder 2, 4-D label. Residue samples were not analyzed due to an obvious label violation.

9. Based on the available information (site observations, PPPDL report, PII information and weather data) Mr. Thomas McCord was in violation of the **Shredder 2, 4-D LV6** label by applying it when *the wind direction did not favor on-target deposition and the complainant's property was within 250 feet downwind.*

Kevin W. Gibson
Investigator

Date: December 6, 2019

Disposition: Thomas McCord and Ceres Solutions, LLP were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift to a non-target site. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Mr. McCord's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

Thomas McCord and Ceres Solutions, LLP were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site.

George N. Saxton
Compliance Officer

Draft Date: January 13, 2020
Case Closed: February 17, 2020

CASE SUMMARY

Case #PS19-0193

Complainant: Viola & Matt Brock
5238 Indiana 158
Bedford, Indiana 47421

Respondent: Thomas Spreen — Private Applicator
8683 Williams Road
Williams, Indiana 47470

1. On May 20, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that the local farmer sprayed a neighboring farm field and now they have pesticide exposure symptoms to their grapes, raspberries and strawberries.

2. On May 28, 2019, I met with the complainant at her residence. The complainant walked me around her property and pointed out her concerns on her grapes, plants in her garden, and ornamentals around the house.

3. During my on-site investigation I did the following:

    a. Looked for, and found one potential sources of herbicide application in the area. The target field for this case is located to the south of the complainant's property. (See Fig. 5).

    b. Observed and photographed grapes with leaves curling and epinasty, hosta plants with yellow and brown spots (leaf necrotic spots), and multiple ferns around the house with burnt leaf tips (See Fig. 1, 2, and 3).

    c. Collected samples of grapes, raspberry, rose, hosta, and fern plants from the complainant's property for assessment by the Purdue Plant & Pest Diagnostic Laboratory (PPPDL)

    d. Collected composite soil samples from the target field. Collected composite soil and vegetation samples from the complainant's property (See Fig. 5). The residue samples were submitted to the OISC Residue Laboratory for analysis.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

- Fig. 1 is grape vines showing leaf curling and epinasty.
- Fig. 2 is a fern showing leaf tip burn.
- Fig. 3 is a hosta plant with yellow and brown spots (leaf necrotic spots).
- Fig. 4 is looking southwest from the complainant's property towards the target field.

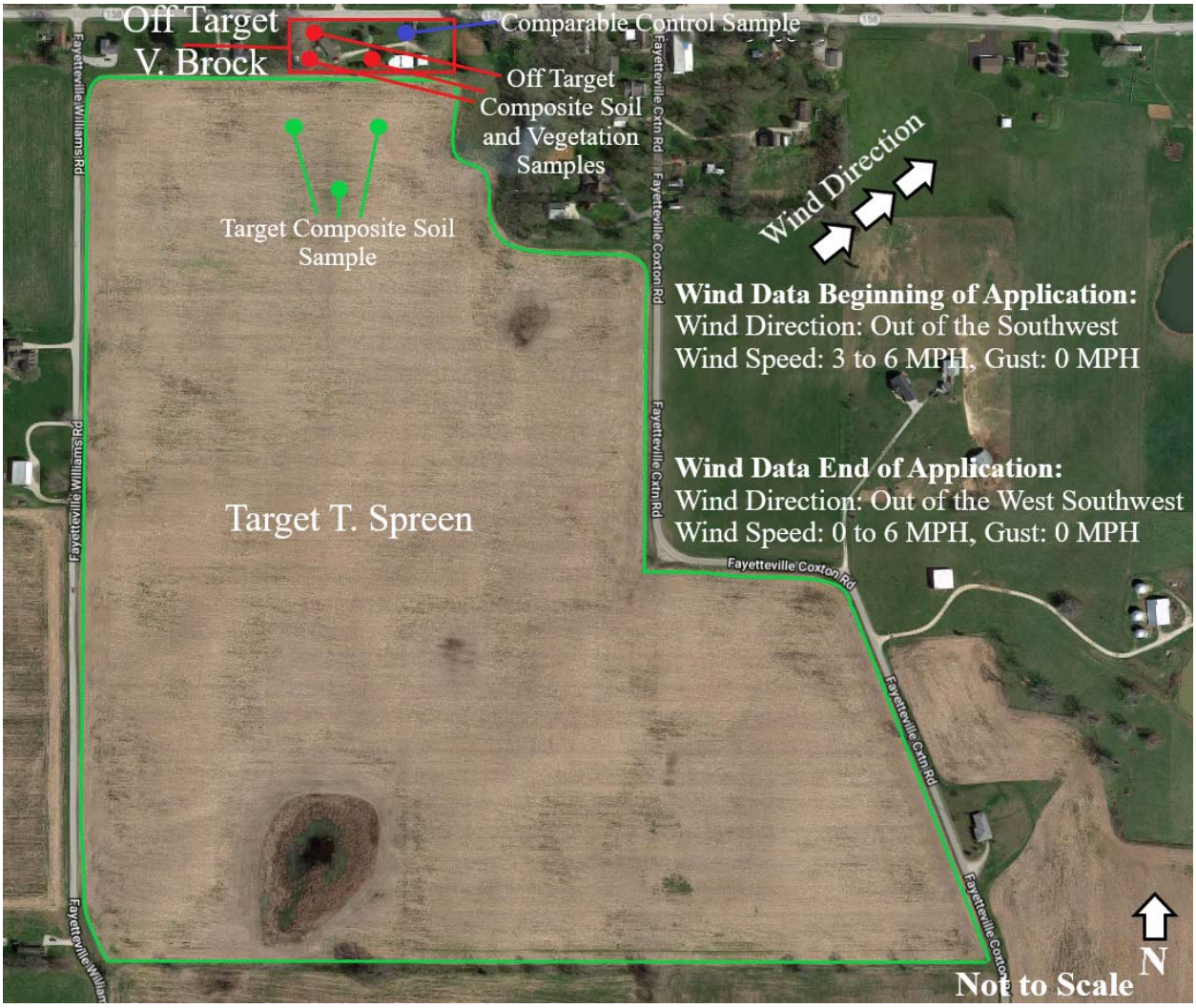


Fig. 5

- Fig. 5 is an aerial diagram including wind data, property lines, and where soil and vegetation samples were taken from.

4. On May 28, 2019, I contacted private applicator Thomas Spreen. I advised Mr. Spreen I was a Pesticide Investigator for OISC and of the complaint I was investigating. Mr. Spreen confirmed he made pesticide application to a field to the south of the complainant's property. I advised Mr. Spreen I would be sending him via email a Pesticide Investigation Inquiry to complete and return to me.

5. On June 24, 2019, I received a completed Pesticide Investigation Inquiry from Mr. Spreen for the application which indicated the following:

    a. Private Applicator: Thomas Spreen
    b. Application Date and Time: May 7, 2019, 10:00am to 12:00pm
    c. Pesticide Applied:
    Sharpen, EPA Reg. #7969-278, Active = saflufenacil, 1oz/acre
    Aatrex 4L, EPA Reg. #100-497, Active = atrazine, 2lbs/acre
    Gramoxone SL 2.0, EPA Reg. #100-1431, Active = paraquat 1qt/acre

d. Adjuvants: MSO
e. Target Field Location and Size: Fayetteville, 101 acres
f. Pre- or Post- Emergent Application: Pre
g. Wind Direction at Boom Height: Start- 0, End- 0
h. Wind Speed at Boom Height: Start- 0mph, End- 0mph
i. Nozzle and Pressure: TT004, 40psi
j. Boom Height: 30 inches

6. Weather history data was obtained at www.wunderground.com from the three closest official weather station to the application site. The locations and weather data for May 7, 2019 follow:

- Lawrenceville-Vincennes International Airport (KLWV) located in Lawrenceville, Illinois 54 miles to the west of the application site:

Date	Time	Temperature	Wind Direction	Wind Speed	Wind Gust
5/7/2019	9:53 AM	68 F	ESE	3 MPH	0 MPH
5/7/2019	10:53 AM	74 F	E	3 MPH	0 MPH
5/7/2019	11:53 AM	72 F	CALM	0 MPH	0 MPH

- Indianapolis International Airport (KIND) located in Indianapolis, Indiana located 61 miles to the north of the application site:

Date	Time	Temperature	Wind Direction	Wind Speed	Wind Gust
5/7/2019	9:54 AM	67 F	SW	3 MPH	0 MPH
5/7/2019	10:54 AM	69 F	WSW	3 MPH	0 MPH
5/7/2019	11:54 AM	73 F	Weather Data Unavailable		

- Louisville International Airport (KSDF) located in Louisville, Kentucky 65 miles to the southeast of the application site:

Date	Time	Temperature	Wind Direction	Wind Speed	Wind Gust
5/7/2019	9:56 AM	71 F	SSW	6 MPH	0 MPH
5/7/2019	10:56 AM	75 F	S	6 MPH	0 MPH
5/7/2019	11:56 AM	77 F	WSW	6 MPH	0 MPH

7. The triangulated wind data from the Lawrenceville-Vincennes International Airport (KLWV), Indianapolis International Airport (KIND), and Louisville International Airport (KSDF) indicate the wind speed during the application was between 3 mph and 6 mph with no gusts out of the south, west, and east.

8. The PPPDL report stated: *The injury observed on the grapes in sample 19-00498 (epinasty, leaf curling, leaf distortion, necrosis, stem dieback) is characteristic of exposure to synthetic auxin herbicide such as 2,4-D, but not atrazine or paraquat. The raspberry and rose samples also showed some auxin injury symptoms (stem twisting and leaf strapping) in combination with necrotic spots that resemble paraquat injury. The big necrotic lesions on the hosta plant do not resemble paraquat injury, but the small necrotic spots do. The fern plants show a*

combination of stem twisting and leaf tip burn. These symptoms are characteristic of auxin herbicides (2,4-D) and Photosystem II herbicides (atrazine), respectively. Other problems identified: Hosta: Possible slug damage (large necrotic areas) Rose: Sawfly insect damage on lower leaves Raspberry: Fungal leaf spot.

9. The OISC Residue Laboratory analyzed the soil and vegetation samples collected for the active ingredients glyphosate, saflufenacil and atrazine and reported the following:

OCM Collection #	**93821**	**Case #**	**PS19-0193**	**Investigator**	**N. Davis**

Sample #	Sample Description	Matrix	Amount of Analyte (ppb)			
			Glyphosate	**AMPA**	**Saflufenacil**	**Atrazine**
19-4-0737-1	Soil, composite, S. target field composite soil	Soil	N/A	N/A	N/A	N/A
19-4-0738-5	Soil, composite, off target composite soil, affected site	Soil	N/A	N/A	N/A	N/A
19-4-0739-2	Vegetation, composite, off target composite veg, affected site	Veg	8.21	BDL	BDL	316*
19-4-0740-7	Soil, control, comparable control soil, affected site	Soil	N/A	N/A	N/A	N/A
19-4-0741-1	Vegetation, control, comparable control veg, affected site	Veg	8.75	BDL	BDL	132

PPM= Parts Per Million; PPB=Parts Per Billion; CONF=Confirmed; LOQ=Limit of Quantitation; BDL=Below detection Limits: this analyte was not detected using the standard analytical methods employed by OISC; BQL=Below quantification limits: this analyte was detected however the amount was lower than the quantification limit established using the standard analytical methods employed by OISC

*Minimum concentration reported due to amount exceeding calibration curve range

N/A = Not Analyzed

LOQ (ppb)	Soil	N/A	N/A	N/A	N/A
LOQ (ppb)	Veg	5	50	0.7	0.1

Signature		**Date**	

10. The OISC Residue Laboratory analysis detected glyphosate and atrazine in the off target composite vegetation samples. The tank mix for this application included the active ingredients atrazine. It should be noted the active ingredient glyphosate was not included in the tank mix for this application.

11. According to the triangulated wind data, the wind during the application was consistently out of the south and varied from the east and west and was blowing towards the complainant's property. The label *for Aatrex 4L, EPA Reg. #100-497, Active Ingredient = atrazine* states:

12. Based on the evidence collected in this investigation of the residue samples results, application records, and wind data, it has been determined Thomas Spreen failed to comply with the Drift Rule.

Nathan J. Davis
Investigator

Date: August 5, 2019

Disposition: Thomas Spreen was cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was Mr. Spreen's first violation. Consideration was also given to the fact a restricted use pesticide was involved.

George N. Saxton
Compliance Officer

Draft Date: November 1, 2019
Case Closed: February 21, 2020

CASE SUMMARY

Case #PS19-0205

Complainant: Harold Gamble
2517 North Quaker Road
Salem, Indiana 47167

Respondent: Bart Barnett — Certified Applicator
Nutrien Ag Solutions — Licensed Business
71 State Road 3
Lexington, Indiana 47138

1. On May 24, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that about two weeks ago, Crop Production Services made a pesticide application to a neighboring farm field that has adversely affected his trees.

2. On May 28, 2019, I spoke with Harold Gamble. Mr. Gamble stated approximately three weeks ago Nutrien Ag made a pesticide application to an adjacent field which drifted onto his property cause pesticide symptomology to his trees. Mr. Gamble stated he spoke with the farm owner, Brian Newby. Mr. Newby stated he did not know what was sprayed.

3. On May 29, 2019, I spoke with Jason Huff, branch manager for Nutrien Ag in Scottsburg, Indiana. Mr. Huff stated Nutrien Ag made applications for Brian Newby. Mr. Newby's fields are adjacent to Mr. Gamble property and are alleged to be the fields sprayed that drifted onto Mr. Gamble's property. A Pesticide Investigation Inquiry (PII) form was emailed to Mr. Huff to have the Nutrien Ag employee, Bart Barnett (certified applicator), complete, sign and return.

4. On May 30, 2019, Agent Bill Reid and I met with Harold Gamble. Mr. Gamble's property is wooded with the field sprayed by Nutrien Ag to the south and west. Pesticide symptomology could be seen on trees scattered throughout the property. Tulip poplar and catalpa trees seem to be visually impacted with cupped leaves, distorted leaves, and some strapping. See figures 1-2.


Figure 1-Tulip poplar


Figure 2 - Catalpa

5. Investigative samples were collected as well as a vegetation sample to be visually analyzed by Purdue's Plant and Pest Diagnostic Lab (PPDL). See site diagram.

6. On May 30, 2019, I received a completed PII from Bart Barnett. Mr. Barnett made a pesticide application on April 31, 2019, to the adjacent farm fields using:
   a. Roundup Powermax (EPA Reg. #524-549, active ingredient glyphosate);
   b. Salvo (EPA Reg. #34704-609, active ingredient 2, 4-D);
   c. Matador (EPA Reg. #34704-1067, active ingredients s-metolachlor, metribuzin and imazethapyr); and
   d. Sonic (EPA Reg. #62719-680, active ingredients sulfentrazone and cloransulam-methyl).

   Mr. Barnett indicated on the PII the wind was out of the west at 5 mph blowing toward Mr. Gamble's property.

7. On May 31, 2019, I received the following report from PPDL;

Diagnosis and Recommendations

Host/Habitat	Mixed Plant material (unspecified)
List of Diagnosis/ID(s)	
Suspected for Herbicide injury; Exposure (Abiotic disorder)	
Suspected for Maple anthracnose (Aureobasidium apocryptum)	

Final Report

May 31, 2019
The catalpa and tulip poplar in sample 19-00511 as well as other trees in the pictures show leaf cupping and/or droopy leaves.These symptoms are characteristic of exposure to synthetic auxin herbicides such as 2,4-D.The necrotic spots on maple did not result from herbicide exposure.The lack of sulfentrazone symptomology on the trees suggests 2,4-D volatility rather than primary drift.

Marcelo Zimmer
Weed Science Program Specialist
Purdue University - Weed Science Lab
Office: (765) 496-2121
email: zimmer6@purdue.edu

The black spots on the maple are caused by anthracnose, a fungal disease.
https://www.purduelandscapereport.org/article/anthracnose-of-shade-trees/

There was no evidence of disease on the other samples.

Tom Creswell

8. On July 11, 2019, I received the following lab results from OISC's Residue Lab;

OCM Collection #	94679	Case #	PS19-0205	Investigator	J. Kelley			
Sample #	Sample Description			Matrix	Amount of Analyte (ppb)			
					2,4-D	Sulfentrazone	Metolachlor	Metribuzin
19-4-3526-0	Swab (acetone), trip blank			Swab	BDL	BDL	BDL	BDL
19-4-3527-3	Swab (acetone) grab/spot, swab from silo in field, target site			Swab	74.8	BDL	7.51	BDL
19-4-3528-7	Swab (acetone), grab/spot, swab from mailbox, other/more			Swab	18.4	BDL	8.02	BDL
19-4-3529-4	Swab (acetone), grab/spot, swab from pump house, affected site			Swab	3.66	BDL	3.14	BDL
19-4-3530-4	Swab (acetone), grab/spot, swab from house window, affected site			Swab	3.98	BDL	12.2	BDL
19-4-3531-5	Soil, grab/spot, soil from target field			Soil	Did not test	Did not test	Did not test	Did not test
19-4-3532-7	Vegetation, control, comparative control, affected site			Veg	3.66	BDL	BDL	BDL
19-4-3533-6	Vegetation, composite, VT-vegetation from target field			Veg	62.5	2.88	37.6	23.9
19-4-3534-3	Vegetation, composite, V1-vegetation, gradient 1			Veg	45.5	BDL	3.99	7.27
19-4-3535-8	Vegetation, composite, V2-vegetation, gradient 2			Veg	24.5	BDL	BQL	7.19
19-4-3536-2	Vegetation, composite, V3-vegetation, gradient 3			Veg	27.2	BDL	6.15	27.6
PPM= Parts Per Million; PPB=Parts Per Billion; CONF=Confirmed; LOQ=Limit of Quantitation; BDL=Below detection Limits: this analyte was not detected using the standard analytical methods employed by OISC; BQL=Below quantification limits: this analyte was detected however the amount was lower than the quantification limit established using the standard analytical methods employed by OISC								
LOQ (ng/swab)				Swab	1	1	2	0.2
LOQ (ppb)				Soil	Did not test	Did not test	Did not test	Did not test
LOQ (ppb)				Veg	2	0.7	3	1

9. Label language for Salvo states in part, "*Avoid direct application or spray drift to susceptible plants since very small quantities of this herbicide can cause severe injury in the growing or dormant period*."

10. Label language for Matador states in part, "*Do not allow sprays to drift onto adjacent desirable plants*."

Paul J. Kelley III

Paul J. Kelley — Date: July 19, 2019
Investigator

Disposition:

A. Bart Barnett was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $1,000.00 was assessed for this violation. Consideration was given to the fact this was his sixth (6th) violation of similar nature. See case numbers 2017/0971, 2017/1188, 2017/1208, 2018/0884 and 2018/1038. Consideration was also given to the fact no restricted use pesticides were involved in this investigation.

B. As of November 26, 2019, Nutrien Ag Solutions had not paid the $1,000.00 civil penalty assessed. A second letter was sent as a reminder the civil penalty is still owed to OISC.

C. As of January 14, 2020, Nutrien Ag Solutions had not paid the civil penalty assessed. The case was forwarded to the Indiana Attorney General for collection. See PS20-0054 for details regarding the suspension of licenses for non-payment of this civil penalty.

D. On February 10, 2020, OISC received the $1,000.00 civil penalty from Nutrien Ag Solutions. OISC terminated the collection process and the license suspension.

George N. Saxton
Compliance Officer

Case Closed: February 21, 2020

CASE SUMMARY

Case #PS19-0225

Complainant: Office of Indiana State Chemist (OISC)
175 S. University Street
West Lafayette, IN 47907
765-494-1492

Respondent: Target
Lauren Hopkins
3630 E. South Street
Lafayette, IN 47905

Registrant: KAS Direct LLC
1600 Stewart Avenue, Suite 411
Westbury, NY 11590

New Address per USPS
637 Commercial Street, Suite 300
San Francisco, CA 94111-6514

1. On June 6, 2019, OISC Agent Sarah Caffery and I performed a routine marketplace inspection at Target located at 3630 E. South Street, Lafayette, Indiana. I spoke with a customer service representative and informed her of the process of the marketplace inspection. She explained that Bob Metz would be the employee in charge that I would need to speak with. She radioed for Mr. Metz explaining the scope of the inspection and he responded saying that we could go ahead and do the inspection and he would meet with us when we were finished. I then issued a Notice of Inspection.

2. Upon completion of the inspection I located one (1) unregistered co-pack pesticide product that was being offered for sale in the Target store. I confirmed through the National Pesticide Information Retrieval System(NPIRS) the pesticide product was unregistered. The product is as follows:

    a. Babyganics outdoor explorer set natural insect repellent, 25(b)[1] product.
        i. 5 units in stock
        ii. Inventoried April 7, 2019
        iii. Co-Pack

3. Upon completion of the inspection, I spoke with Lauren Hopkins, who was filling in for Mr. Metz, and informed her of the unregistered pesticide product I had located. I informed her that I would be issuing an Action Order instructing them to remove the remaining products of the unregistered pesticide products from the shelves and place them in storage and that they are not to be sold or removed from the store unless contacted in writing by OISC. I also

[1] Minimum Risk Pesticide

informed her that I would be retaining an evidentiary sample of the product for my case. I asked Mrs. Hopkins if she was able to provide me with any information for when the last shipment came to the store. Mrs. Hopkins was able to provide me with an item inventory for the pesticide product. Mrs. Hopkins stated that this would be the oldest receiving record they have on file.

4. I placed the evidentiary sample into a clear evidence bag and sealed for transportation to the OISC formulation lab.

5. On June 7, 2019 I delivered the evidentiary sample to the Formulation Lab.

Fig. 1

- Fig. 1) Photo showing Babyganics outdoor explorer set natrual insect repllent co-pack.

6. All supporting documents and photos have been electronically attached to the OISC case management system.

Garret A. Creason
Investigator

Date: June 10, 2019

7. On July 19, 2019, I completed the label review for the products found in distribution.
    a. Babyganics outdoor explorer set natural insect repellent
        i. This package is considered a co-pack. It includes a pesticide and non-pesticide product. The full outer labeling was reviewed for compliance with EPA regulations for a 25(b) and a co-pack.
        ii. Per the review of the label, the product complies with EPA's 6 conditions for 25(b) pesticide products.
        iii. Per the label review, the product complies with EPA requirements for a co-pack.

8. Review was only completed on the product/label that was found in distribution. Additional concerns might become apparent with review of application documents and websites.

Sarah K. Caffery

Sarah K. Caffery
Pesticide Product Registration Specialist

Date: July 19, 2019

Disposition:

A. On June 12, 2019, a label review was requested from the Pesticide Product Registration Specialist.

B. As a result of the investigation and label review:

    a. Target was warned for violation of section 57(1) of the Indiana Pesticide Registration Law for offering for sale a pesticide product that was not registered for sale in the state of Indiana.

    b. KAS Direct LLC was cited for violation of section 57(1) of the Indiana Pesticide Registration Law for distributing a pesticide product that was not registered for sale in the state of Indiana. A civil penalty in the amount of $250.00 was assessed for this violation. However, the civil penalty will be held in abeyance and not assessed provided KAS Direct LLC properly registers the pesticide product within thirty (30) days from receipt of this notice.

    c. On November 13, 2019, Compliance was notified that the registration request was denied by the Pesticide Product Registration Specialist and KAS Direct LLC will not continue with the registration process. The civil penalty in the amount of $250.00 was reassessed.

    d. On November 15, 2019, the Action Order issued to Target was released.

    e. On January 16, 2020, OISC received payment for the $250.00 civil penalty.

George N. Saxton
Compliance Officer

Draft Date: August 5, 2019
Case Closed: September 17, 2019
Case Reopened: November 15, 2019
Draft Date: December 10, 2019
Case Closed: February 10, 2020

CASE SUMMARY

Case #PS19-0264

Complainant: Brian Warpup
3344 E. CR700 S.
Warren, IN 46792

Respondent: Troy Wolfe — Private Applicator
3618 E. CR200 N.
Huntington, Indiana 46750

Farm Location: 6113 N. CR500 E.
Roanoke, IN 46783

1. On June 25, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that on June 14, 2019, Troy Wolfe made a dicamba application to a neighboring field north of his and did not leave a buffer. The complainant stated the winds were 18 to 25 mph at the time.

2. On June 26, 2019, I spoke with Brian Warpup who reported he contacted Mr. Wolfe after observing him in the field north of his non dicamba-tolerant (DT) soybean field. He then learned that Mr. Wolfe had sprayed the field to the east the day prior (See Case PS19-0263).

3. On June 26, 2019, I met Mr. Warpup at his soybean field on the east side of CR400 East in Huntington County. Mr. Warpup indicated he did not think his soybeans had developed any herbicide exposure symptoms, but he called the OISC because he believed it was too windy to spray. We looked at his recently-emerged soybeans and, while there was no biological barrier or fence row dividing the fields, no herbicide exposure symptoms were observed on the non-DT soybean plants. Subsequently, no plant samples were collected. I explained that I would follow up with Mr. Wolfe regarding the applications.

4. I contacted Mr. Wolfe and informed him of the complaint. He confirmed he sprayed the field north of the Warpup field with a tank mix containing Engenia but the wind was blowing away from the non-DT beans. Mr. Wolfe also reported that, because of the wind, he made three trips to this particular field before completing the application on June 14, to ensure his choice of chemistry did not affect his neighbors. I explained that this complaint was different than most in that no off-target herbicide symptoms were reported so the investigation would focus on his use of the herbicides and the conditions at the time.

Fig.1 Aerial photo of fields

5. I later sent Mr. Wolfe a Pesticide Investigation Inquiry (PII) for the application he made to the field ("Clark Farm") north of the Warpup soybean field. Mr. Wolfe later returned the PII which provided the following information:

   a. Certified Applicator: Troy Wolfe
   b. Application date and time: June 14, 2019, from 9am – 9:40am
   c. Pesticides: Engenia (dicamba) EPA Reg. #7969-345
      Roundup PowerMax (glyphosate), EPA Reg. #524-549
      Medal II EC (S-metolachlor), EPA Reg. #100-818
   d. Adjuvants: Clasp, Smoke
   e. Target field: Clark Farm
   f. Pre or post application: Post
   g. Wind speed/direction at start: 8mph from south-southwest (away from Warpup field)
   h. Wind speed/direction at end: 10mph from south-southwest
   i. Nozzles: TTI 04/red tips
   j. Boom Height: 20 in. off canopy
   k. Downwind Buffer: **Wasn't required**
   l. Checked registrant's website before application: 5/30/19
   m. Checked DriftWatch before application: 6/14/2019
   n. Dicamba mandatory training attended: Left blank (reportedly attended two at Helena)

6. I checked recorded NOAA wind data for June 14, 2019 at the Fort Wayne (FW) International Airport (13 miles northeast of the site) and at the Marion Municipal Airport (28 miles south-southwest of the site) and found the following:

   - FW 854am* 13mph from west-southwest (away from Warpup field)
   - FW 954am* 13mph from southwest

   *Recordings at FW were just prior to and just after the reported application time

   - Marion 915am 13mph from southwest
   - Marion 935am 15mph from west-southwest

7. The Engenia label reads, in part, **"DO NOT apply Engenia if wind speed is less than 3 mph or greater than 10 mph."**

Andrew R. Roth
Investigator

Date: December 6, 2019

Disposition: Troy Wolfe was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was his first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

George N. Saxton
Compliance Officer

Draft Date: December 13, 2019
Case Closed: February 4, 2020

CASE SUMMARY

Case #PS19-0280

Complainant: Steve Smith
P.O. Box 83
Elwood, IN 46036

Respondent: Brian Mote — Certified Applicator
Mote Farm Service — Licensed Business
8531 East CR100 South
Union City, IN 47390

1. On July 2, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a pesticide application was made to a field in the area of CR300 East and CR400 South in Randolph County that has adversely affected his tomatoes.

2. On July 2, 2019, I spoke with Steve Smith who reported a "classic drift" incident at the field. He indicated he contacted Derrick Mote, of Mote Farm Service, and the two had looked at the field the day prior. Mr. Smith stated that, after meeting Mr. Mote at the site on July 1, another field across the road and adjacent to the north end of the tomato field was sprayed by Mote Farm Service while winds were blowing toward the tomatoes.

3. On July 3, 2019, I met Mr. Smith at the tomato field on the east side of CR300 East. He indicated that the grower, Greg Knick, was coming to the site and would have application records for the tomatoes. Mr. Smith reported symptoms were developing on tomato plants at the north end of the field, across from the second Mote application. However, it was decided this site would remain one investigation regarding the original application made to the target field across CR300 East to the southwest (Fig.1). There was one other adjacent field, south of the tomatoes, but it had not been sprayed. Tomato plants were at different growth stages because of different plant dates. Herbicide exposure symptoms, including chlorosis and burnt leaf edges, were widespread and more severe in the south and west portions of the tomato field; severity lessened to the north and east, away from the target field. Similar symptoms were observed on weeds in the ditch and near the road along the untreated field.

4. Mr. Knick arrived and we discussed the applications he had made to the tomato plantings. Between Mr. Smith and Mr. Knick, I was provided application information for the tomato plantings at the farm. I photographed the site, documenting the symptoms observed and the proximity of the fields. I collected plant samples from different areas of the tomato field for assessment by the Plant & Pest Diagnostic Lab (PPDL) at Purdue. I also collected the following samples for the OISC Residue Lab (locations marked in Fig.1):

   - Soil and vegetation (weeds) samples from the target field
   - Gradient vegetation (tomato) samples across the field from southwest to northeast
   - Control vegetation (deciduous foliage) from wooded area northeast of tomato field

Fig.1 Aerial photo of site


Fig.2 SW portion of field


Fig.3 Weeds near road (SW)


Fig.4 Weeds and tomatoes


Fig.5 Chlorotic, burnt tomato leaves


Fig.6 Protected plants near ditch


Fig.7 Tomato plants north of lane

5. I contacted Derrick Mote who confirmed Brian Mote sprayed the field southwest of the tomatoes over two days in late June. He indicated the west side of the field was sprayed on June 25 and the east side was sprayed the next morning. He noted that a 300-ft buffer strip along CR300 East was left unsprayed to avoid off-target movement. According to application records provided Mote's, Brian Mote sprayed a tank mix containing:

    a. Atrazine 4F (EPA Reg. #100-497-5905);
    b. Resicore (EPA Reg. #62719-693), active ingredients acetochlor, clopyralid and mesotrione; and
    c. Roundup PowerMax (EPA Reg. #524-549), active ingredient glyphosate.

    Winds were reportedly out of the southwest, blowing toward the tomato field, at `8-9mph from 512pm-641pm on June 25. Winds were listed as being from the southwest, again blowing toward the tomato field, at 6-7mph when the application was finished from 741am-759pm on June 26.

6. The PPDL report indicated, "*The tomato plants show chlorosis of the new growth (symptom of glyphosate and/or mesotrione exposure) and interveinal chlorosis and necrosis of leaf edges (symptom of atrazine exposure). The weeds on the edge of the field (giant ragweed and horseweed) also display similar symptoms, indicating exposure to these herbicides.*" It further stated, "*From the photos provided, it seems that non-grass plants are affected, including weeds on the corn field border and the tomatoes in the field nearby. Symptoms include yellowing, bleaching, and upward cupping of leaves. There are a few factors that could cause the yellowing and bleaching, such as high pH or severe iron deficiency, and cupping, such as Tomato yellow leaf curl virus (transmitted by whiteflies), but the distribution of symptoms and the severity is more similar to spray injury. Bleaching caused by a micronutrient deficiency will be observed on new foliage and across the entire leaf, which is not consistent with symptoms observed on the sample or in the photos.*"

7. The OISC Residue Lab analyzed the samples for several active ingredients reported as being applied to the target field (AMPA is the breakdown product of glyphosate) and reported the following:

OCM Collection #	101595	Case #	PS19-0280	Investigator	A. Roth

Sample #	Sample Description	Matrix	Amount of Analyte (ppb)				
			Glyphosate	AMPA	Acetochlor	Mesotrione	Atrazine
19-4-4237-0	Vegetation, control veg, other/more	Veg	134	BDL	BQL	BQL	265
19-4-4238-9	Vegetation, composite, tomato – 2700ft, affected site	Veg	191	BDL	2.86	10.1	233
19-4-4239-1	Vegetation, composite, tomato – 1800ft, affected site	Veg	235	BDL	4.97	9.66	329
19-4-4240-6	Vegetation, composite, tomato – 900ft, affected site	Veg	811	BDL	23.7	27.1	625
19-4-4241-0	Vegetation, composite, tomato – SW section, affected site	Veg	1580	BQL	112	56.4	1510
19-4-4242-3	Vegetation, composite, target veg, target site	Veg	168000	5830	1710*	4910*	109000
19-4-4243-4	Soil, composite, target soil, target site	Soil	N/A	N/A	N/A	N/A	N/A

PPM= Parts Per Million; PPB=Parts Per Billion; CONF=Confirmed; LOQ=Limit of Quantitation; BDL=Below detection Limits: this analyte was not detected using the standard analytical methods employed by OISC; BQL=Below quantification limits: this analyte was detected however the amount was lower than the quantification limit established using the standard analytical methods employed by OISC

N/A = Not Analyzed

*Minimum concentration reported due to amount exceeding calibration curve range

LOQ (ppb)	Veg	10	125	3	3	0.3
LOQ (ppb)	Soil	N/A	N/A	N/A	N/A	N/A

Signature		Date	08/13/2019

8. The Resicore label reads, in part, **"Do not apply when wind conditions favor drift to non-target sites."** Further, the Roundup PowerMax label reads, in part, **"Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation, as small quantities of this product can cause severe damage or destruction to the crop, plants or other vegetation on which application was not intended."**

Andrew R. Roth
Investigator

Date: November 13, 2019

Disposition: Brian Mote and Mote Farm Service were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Brian Mote's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

Brian Mote and Mote Farm Service were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site.

George N. Saxton
Compliance Officer

Draft Date: December 12, 2019
Case Closed: February 4, 2020

CASE SUMMARY

Case #PS19-0319

Complainant: David Loser
6780 Sleeper Road
Lafayette, Indiana 47909

Respondent: Ceres Solutions Cooperative, Inc. — Pesticide Business
David Rasnic — Certified Applicator
Box 214
214 S. Vine Street
Wingate, Indiana 47994

1. On July 8, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a neighboring farmer made a herbicide application to a farm field and now he has pesticide exposure symptoms to his trees.

2. On July 10, 2019, I met with David Loser, who reported injury to his many oak trees, walnut trees and other mixed vegetation on his property. Mr. Loser stated the property is approximately 44 acres consisting of three residences, 6736, 6780, & 6834 Sleeper Rd., Lafayette, IN. Within the 44 acres there is a mix of turf grass, 24 acres of certified forest, and a 10 acre field planted with soybeans. Mr. Loser stated he began noticing the leaves on most of the trees on the property to start curling and wilting approximately three weeks ago.

3. Mr. Loser advised his property is surrounded by multiple cash crop fields with four different applicators treating the fields. Mr. Loser provided me with the names and contact numbers of all the applicators. See figure #1 below for the fields and their corresponding applicators.

(Fig. #1-Applicator map)

4. During my on-site investigation, I did the following:

   a. Observed and photographed symptoms of herbicide injury to the vegetation on the Loser property. After walking the perimeter of the 44 acres, I observed nearly every oak tree on the property, as well as many walnut trees, and other various vegetation to show signs of herbicide injury, including the leaves to be cupped and curled that is consistent with growth regulator exposure. I also observed necrotic spotting on vegetation that is consistent with herbicide burn along Sleeper Rd. I only observed the necrotic spotting along the properties south border, suggesting exposure coming from the south.
   b. Looked for potential sources of herbicide drift. When focusing on the walnut trees, I began to observe a drift pattern coming from the south of the property, suggesting a wind out of the south. The walnut trees on the south and southeast border showed heavy exposure symptoms to their leaves while the west and north borders did not show herbicide injury. After my observations, I concluded the herbicide drift had potentially originated from the two fields directly to the south of Mr. Loser's property, the soybean field treated by Douglas Raub and the corn field treated by Ceres Solutions; Wingate.
   c. Collected samples of multiple walnut tree leaves, oak tree leaves, and other various vegetation exhibiting symptoms from Mr. Loser's property for assessment by the Purdue Pest and Plant Diagnostic Lab (PPDL).
   d. Collected gradient composite samples of the affected vegetation and a control vegetation sample from the Loser properties. Composite soil samples were taken from the soybean field and corn field. All samples were submitted to the OISC Residue Lab for analysis. See Figure 2 for sample collection map.

(Fig. 2-Collection map)

(Fig. 3-Cupped and curled leaves)

(Fig. 4-Curled and spotted leaves)

5. Sleeper Road (County Road 525 W.) splits the residential property from the corn and soybean fields to its south. The soybean field consists of approximately 10 acres and is also owned by Mr. Loser but is managed by Mr. Raub.

6. The corn field and soybean field in question are directly adjacent to each other and have no barriers in between. After walking between the two fields, I observed the soybeans to show symptoms of herbicide injury, including chlorosis on the leaves. The injury observed on the soybeans was most prevalent on the south border (next to the corn) and became less noticeable the further north I went. It was later found that the soybean field was planted the same day the south corn field was sprayed. The type of injury observed to the soybeans leaves and the date of application to the corn field suggest the injury was caused by possible Atrazine soil contamination.

(Fig. 5-Soybean injury)

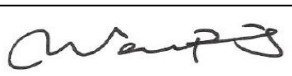
7. A Pesticide Investigation Inquiry (PII) was sent to Michael Carrell at Ceres Solutions at Wingate. The PII was completed and sent back to me along with several other documents pertaining to the application. The PII listed Michael Carrell as the Certified Applicator but the other provided documents listed David Rasnic as the applicator. Mr. Carrell was contacted, who confirmed Mr. Rasnic as the applicator and himself as the supervisor. The information on the PII was corrected. The PII provided the following information:

a. Certified Applicator: ~~Michael Carrell~~ David Rasnic (corrected on 11/18/2019)
b. Company name: Ceres Solutions Cooperative
c. Application date and time: June 4, 2019, from 6:30 PM-8:25 PM
d. Wind speed & from which direction at start: 10 MPH from south, southwest
e. Wind speed & from which direction at end: 5 MPH from west, southwest
f. Pesticides:
    i. Cinch ATZ (EPA Reg. #352-624, active ingredients of Atrazine & Metolachlor)
    ii. Shredder 2,4-D LV6 (EPA Reg. #1381-250, active ingredient of 2,4-D)
    iii. Roundup Powermax (EPA Reg. #524-549, active ingredient of Glyphosate)
g. Adjuvant: none
h. Target field: Major farm, located east of 525 W. at 700 S.
i. Pre or post application: Pre
j. Method or equipment used to measure wind & temp.: Handheld Kestrel 1000

8. The PPDL report advised: *"The oaks and walnut branches in sample 19-922 show leaf strapping/cupping that is characteristic of exposure to synthetic auxin herbicides such as 2,4-D or dicamba. The Hackberry plant does not show any herbicide injury symptom, but it is heavily infested with nipple gall (caused by insects). The cucumber plant in the photos also show injury due to auxin herbicide exposure. The soybean plants in the pictures show injury symptoms that resemble exposure to HPPD herbicides, but do not show 2,4-D symptoms."* It further stated: *"Oak: there are three branches with two having some general leaf curling and widespread, necrotic leaf spots that appear to be of various sizes. Spots end up falling out, causing a shot-hole. Within the curled leaves, secondary insects could be found, causing further curling or just taking advantage of the more appropriate habitat provided. Curling could be caused by insect activity, environmental factors, or herbicide exposure. The necrotic spots are consistent with a chemical burn of some sort. Depending on the plant, this type of injury can lead to the tissue falling out, leaving a hole. Another oak branch has some white patches of powdery mildew spores and some window-paneing caused by a sawfly larvae or caterpillar. Walnut: growth regulator injury suspected causing twisting of leaves with some contact burn on various leaves causing black, necrotic margins and blotches. Hackberry: there is some leaf cupping which would likely be associated with growth regulator injury. All other symptoms are relatively normal for hackberry leaves as they almost always have the hackberry nipple gall, random holes and odd insect feeding, and are relatively rough in appearance. Annual (likely tradescantia): these spots are likely to be caused by a chemical burn. No structures were observed and they seem to not affect the newest foliage, indicative of a potential injury event. Soybean Photos: Bleaching of only the leaf tips and leaf twisting is likely to be caused by a chemical injury of some sort and not disease. Annual vine photo: Leaf cupping is normally associated with a chemical injury, especially considering the growth regulator injury observed on other plants."*

9. Due to my above findings, I informed the OISC Residue Lab of the tank mixes used on the south soybean field (Mr. Raub) and south corn field (Ceres, Mr. Rasnic). The OISC Residue Lab tested the samples for the unique ingredients in each tank mix, including Metolachlor (corn field), Atrazine (corn field), and Flumioxazin (soybean field). None of the other identified fields had used the combination of Atrazine and Metolachlor or used Flumioxazin.

10. The OISC Residue Lab reported the following:

OCM Collection #	102157	Case #	PS19-0319	Investigator	M. Trimble		
Sample #	Sample Description			Matrix	Amount of Analyte (ppb)		
					Metolachlor	Flumioxazin	Atrazine
19-4-6507-0	Vegetation, composite, oak trees, other veg, gradient 1, other/more			Veg	5.79	BDL	99.5
19-4-6508-9	Vegetation, composite, oak, walnut, other veg, gradient 2, other/more			Veg	23.5	BDL	51.8
19-4-6509-1	Vegetation, composite, walnut trees, other veg, South, other/more			Veg	7.05	5.04	217
19-4-6510-1	Vegetation, control, unknown veg, South, West, other/more			Veg	BDL	BDL	11.0
19-4-6511-7	Soil, composite, corn field, target site, other/more			Soil	27.3	BDL	12.6
19-4-6512-9	Soil, composite, soybean field, target site			Soil	8.31	BDL	5.44
PPM= Parts Per Million; PPB=Parts Per Billion; CONF=Confirmed; LOQ=Limit of Quantitation; BDL=Below detection Limits: this analyte was not detected using the standard analytical methods employed by OISC; BQL=Below quantification limits: this analyte was detected however the amount was lower than the quantification limit established using the standard analytical methods employed by OISC							
LOQ (ppb)				Veg	3	3	0.1
LOQ (ppb)				Soil	3	1	0.07
Signature				Date	08/13/2019		

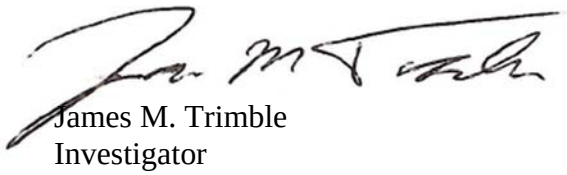
(Fig. 6-Lab results)

11. The above lab results advise that the herbicides used on the south corn field were found in the samples from Mr. Loser's property and in the south soybean field. The elevated amounts of Metolachlor and Atrazine found in the samples suggest drift had occurred from the south corn field onto Mr. Loser's residential property and his soybean field. Furthermore, the 217 parts per billion (ppb) of Atrazine found in sample #3 (19-4-6509-1) explain why the necrotic spotting was only observed on the vegetation along Sleeper Rd. because According to the pesticide residue laboratory director, atrazine injury symptoms of necrotic spots doesn't appear on leaf tissue until approximately 200 ppb. Taking into account the low levels of Flumioxazin found only in sample #3, the location of where sample #3 was extracted in relation to the south soybean field, and the wind direction during Mr. Raub's application, from the northeast (away from Mr. Loser's property), drift from the south soybean field onto the Loser property was found not to be a factor in this case.

12. The tank mixes and weather conditions for all five of the surrounding fields applications were reviewed. Though the three fields planted with corn had all been treated with Atrazine, the south corn field treated by Mr. Rasnic was the only field treated with the combination of Atrazine and Metolachlor. The only other field treated with Metolachlor, the north soybean field, was treated during a wind coming from the south, southwest (away from Mr. Loser's property). Ceres Solutions advised Mr. Rasnic's application to the south corn field had winds coming from the south, southwest (towards Mr. Loser's property). The higher degree of injury along the south side of Mr. Loser's property along with the Atrazine injury symptoms I only observed on the properties south end and on the soybeans in the south field also is evident of drift from the south corn field. My on-site observations did not find injury suggestive of drift coming from any other field.

13. Ceres Solutions' acknowledgement of the wind was blowing towards Mr. Loser's property during Mr. Rasnic's application, the OISC Residue Lab's confirmation of a chemical gradient, and the drift pattern I observed conclude that Mr. Rasnic's application of Cinch ATZ, Shredder 2,4-D LV6, and Roundup Powermax to the targeted corn field on June 4,

2019 was completed in a manner that allowed it to drift in sufficient quantity to cause harm to Mr. Loser's non-target residential area and non-target soybeans.



James M. Trimble Date: November 25, 2019
Investigator

Disposition: David Rasnic and Ceres Solutions Cooperative Inc. were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Mr. Rasnic's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

George N. Saxton Draft Date: December 12, 2019
Compliance Officer Case Closed: February 4, 2020

CASE SUMMARY

Case #PS19-0333

Complainant: Christopher Farmer
4202 N. 700 E.
Portland, Indiana 47371

Respondent: Mercer Landmark, Inc.
Todd Siegrist **Licensed Applicator**
3911 Burkettsville St. Henry Road
Coldwater, Ohio 45828

1. On July 10, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report about three or four weeks ago one of the Mercer Landmarks made a pesticide application to a neighboring farm fields that adversely affected his entire property.

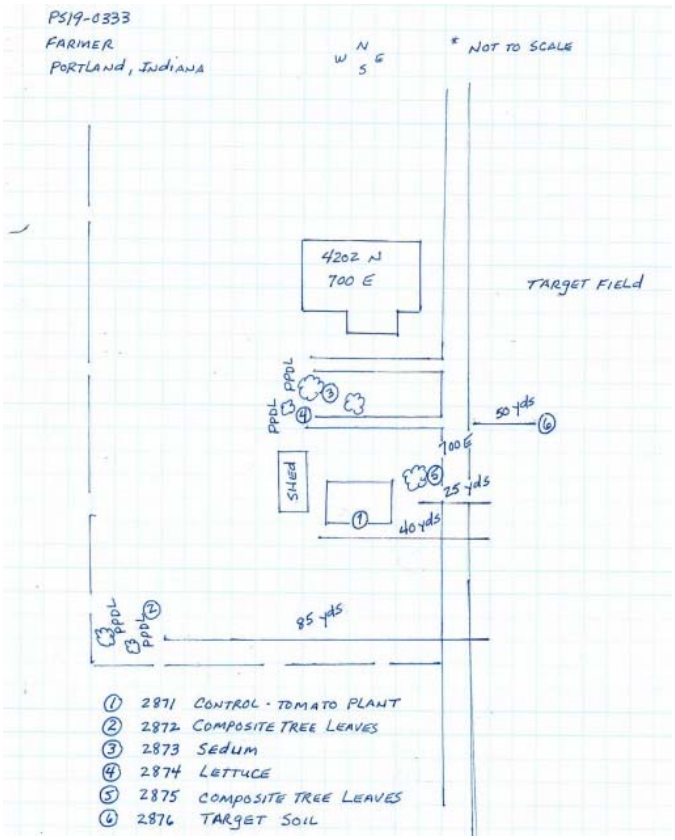
2. On July 15, 2019, I met with the complainant Christopher Farmer. Mr. Farmer told me a pesticide application was made to a farm field next to his property that hurt the plants on his property. I checked the plants and vegetation on his property. I observed some apple tree leaves with "burn" holes. The sedum plants appeared to also have "burn" holes on its leaves. The lettuce leaves appeared to have some cupping. (see photos below).

3. I obtained the following vegetation samples for submission to the Purdue Plant and Pest Diagnostic Lab (PPPDL) for analysis:

   - apple tree leaves
   - lettuce leaves
   - sedum leaves
   - tomato plant leaves

4. I placed the following environmental samples in Mylar bags for submission to the OISC Residue Lab for analysis: (see diagram below)

2871	control vegetation	2872	composite tree leaves
2873	sedum leaves	2874	lettuce leaves
2875	composite tree leaves	2876	target soil



5. I learned Todd Siegrist of Mercer Landmark Inc. made a pesticide application to the farm field east of the complainant's property. Mr. Siegrist agreed to complete and return a Pesticide Investigation Inquiry (PII) to OISC for processing.

6. I received the following information from PPPDL: "*The injury to the apple branches in sample 19-960 consisted of small necrotic spots and leaf chlorosis. These symptoms are characteristic of exposure to PPO- inhibiting herbicides (group 14/ sharpen) and glyphosate (Roundup PowerMax), respectively. The necrotic spots on the Sedum plants are too large and have irregular shape and cannot be associated with drift rates of contact herbicides. Therefore, the injury to these plants is not likely caused by herbicide exposure. There are no symptoms on the lettuce plants that can be associated with the herbicides listed or any other herbicide Mode of Action. Damage to the apple includes some insect feeding and spotting caused by rust disease but the majority of the spots seem to be injury induced. The sedum may have been damaged by earlier insect feeding as the leaves were developing but the spotting could not be associated with a disease. The lettuce plants submitted are bolting (about to flower and set seed) and lower leaves of these plants are probably showing normal age senescence along with the effect of shading in tightly packed plantings. The photos of some leave show symptoms of tip burn, a common abiotic problem on lettuce that is related to water update and nutrient movement in hot weather.*"

7. I received a completed PII from pesticide applicator Todd Siegrist. According to the PII, Mr. Siegrist made a pesticide application of:

    - **Valor XLT** (EPA #59639-17; active ingredient: chlorimuron, flumioxazin)
    - **Roundup PowerMax** (EPA #524-549; active ingredient: glyphosate)
    - **Province II** (EPA #100-1295-55467; active ingredient: cyhalothrin)
    - **Sharpen** (EPA #7969-278; active ingredient: saflufenacil)

on June 8, 2019 between 3:15pm and 3:45pm. He recorded the wind blowing 10-15 miles per hour in a westerly direction toward the complainant's property.

8. The weather data I obtained from www.wunderground.com confirmed the weather information provided by Mr. Siegrist. According to weather data from Fort Wayne International Airport (40 miles northwest) for June 8, 2019, the wind was blowing 20 miles per hour in a westerly direction toward the complainant's property.

9. I checked the labels for **Valor XLT, Roundup PowerMax, Province II and Sharpen**. The label for **Sharpen** reads in part, "*Apply this product only when the potential of drift to adjacent nontarget areas is minimal (e.g. when the wind is 10 MPH or less and is blowing away from sensitive areas"*.

10. Based on the available information (site observations, PPPDL report, PII information and weather data), Mr. Siegrist was in violation of the **Sharpen** label when he failed to apply it *when the wind was 10 MPH or less and was blowing away from sensitive areas.* **Residue samples were not analyzed due to an obvious label violation.**

Kevin W. Gibson — Date: December 10, 2019
Investigator

Disposition: Todd Siegrist and Mercer Landmark Inc. were cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was Mr. Siegrist's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

Todd Siegrist and Mercer Landmark Inc. were cited for violation of section 65(6) of the Indiana Pesticide Use and Application Law, specifically 357 IAC 1-12-2, for applying a pesticide in a manner that allows it to drift from the target site in sufficient quantity to cause harm to a non-target site.

George N. Saxton — Draft Date: January 22, 2020
Compliance Officer — Case Closed: February 13, 2020

CASE SUMMARY

Case #PS19-0359

Complainant: Gary Miller
6825 S. CR800 West
Pleasant Lake, IN 46779

Respondent: Matthew Ridenour — Private Applicator
3485 E. CR 20 North
Angola, IN 46703

1. On July 18, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that Ridenour Farms applied dicamba to a field of dicamba-tolerant (DT) soybeans which drifted onto his Liberty Link beans.

2. On July 19, 2019, I spoke with Gary Miller who reported leaf-cupping was observed on non-DT soybeans in one of his fields when it was sprayed recently. The affected beans were in a small, 8-acre field which was bordered by trees on all sides except the south side where it was open to a field farmed by Ridenour Farms.

3. On July 22, 2019, I met Mr. Miller at his farm and followed him to the affected field south of CR450 South in Steuben County. He indicated that he was not contacted by anyone from Ridenour Farms regarding what type of soybeans he had planted in his field. Mr. Miller reported there was a lot of crop damage from dicamba use in the area last year but growers did not call the OISC. He indicated applicators need to follow the rules and also expressed concern that the current enforcement for violators was too lenient.

4. During my on-site investigation, I did the following:

   a) Looked for, but did not find, any other potential sources of dicamba adjacent to the Miller soybean field. The target (Ridenour) field was across a narrow lane to the south with only a few feet separating crops.
   b) Observed and photographed mostly-uniform, widespread cupping and puckering of leaves on non-DT soybean plants across a majority of the Miller soybean field. These symptoms are commonly associated with exposure to a growth-regulator type herbicide such as dicamba.
   c) Collected soybean plant samples from the Miller field for assessment by the Plant & Pest Diagnostic Lab (PPDL) at Purdue.
   d) Collected four gradient plant samples from soybeans exhibiting symptoms across the Miller field from south-to-north; samples were collected from the south side of the field, and then from 200 feet, 350 feet and 500 feet into the Miller field. Collected a soil sample from the north side of the target field, across the lane from the Miller soybean field. Those samples were submitted to the OISC Residue Lab for analysis.

Fig.1 Aerial Photo of fields


Fig.2 Miller soybeans and lane


Fig.3 Cupped non-DT beans

5. On July 22, 2019, I spoke with Matt Ridenour and informed him of the complaint. He confirmed he sprayed the field which abuts the Miller field a couple of weeks prior with a tank mix containing Engenia. I emailed a Pesticide Investigation Inquiry (PII) to Mr. Ridenour the next day. I had not received any information by the first week of November so I contacted Mr. Ridenour and he forwarded a partially-completed PII on November 11. I then informed Mr. Ridenour I needed more complete information to move forward. On December 12, I received a completed PII which provided the following information:

    a. Certified Applicator: Matt Ridenour
    b. Application date and time: July 19, 2019, from 1015am – 1150am
    c. Pesticides: Buccaneer Plus (glyphosate), EPA Reg. #55467-9
       Engenia (dicamba), EPA Reg. #7969-345
       Zidua (pyroxasulfone), EPA Reg. #7969-338
    d. Adjuvants: 8 Ball
    e. Target field: (Left blank)
    f. Pre or post application: Post
    g. Wind speed/direction at start: 3mph from east-southeast (toward Miller field)
    h. Wind speed/direction at end: 3mph from east-southeast
    i. Nozzles: TeeJet TT160
    j. Boom Height: 30” average – very hilly
    k. Downwind Buffer: Lane width – 10’
    l. Checked registrant’s website before application: 7/1
    m. Checked DriftWatch before application: 7/1
    n. Dicamba mandatory training attended: Attended, no card on hand

6. I checked recorded NOAA wind data at the closest official weather station to the application site. Winds at the DeKalb County Airport (Auburn), which is 18 miles south-southeast of the fields, confirmed winds were between 3-6mph and generally from the southeast, blowing toward the Miller soybean field, during the reported time of the application.

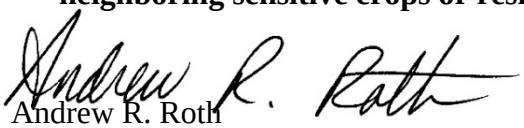
7. The PPDL report indicated, *“The soybeans in sample 19-1044 showed cupped leaves with whitish leaf tips, reduced growth of apical meristem and increased number of nodes. Furthermore, the soybean rows right next to neighboring field are either completely dead or showed necrotic apical meristems and stem twisting, which indicates exposure to fairly high rates of dicamba.”* It further stated, *“The sample showed significant leaf cupping, leaf crinkling, plant stunting, and stem twisting. Symptoms are similar to growth regulator injury and not suspected to be associated with a disease.”*

8. The OISC Residue Lab analyzed the samples for dicamba, its breakdown products, DCSA and 5-OH dicamba, and for glyphosate, its breakdown product AMPA, and for pyroxasulfone. The results are as follows:

OCM Collection #	105501	Case #	PS19-0359	Investigator	A. Roth				
Sample #	Sample Description	Matrix	Amount of Analyte (ppb)					
			5-OH Dicamba	DCSA	Dicamba	AMPA	Glyphosate	Pyroxasulfone
19-4-4252-0	Vegetation, composite, NDT beans-500ft, affected site	Veg	BDL	0.263	4.95	BDL	BDL	BDL
19-4-4253-1	Vegetation, composite, NDT beans-350ft, affected site	Veg	BDL	0.369	6.17	BDL	BDL	BDL
19-4-4254-9	Vegetation, composite, NDT beans-200ft, affected site	Veg	BDL	0.416	4.50	BDL	BDL	BDL
19-4-4255-4	Vegetation, composite, NDT beans-south, affected site	Veg	BQL	1.98	26.1	BDL	BDL	BDL
19-4-4256-5	Soil, composite, target soil, target site	Soil	BQL	122*	42.9*	294	421	49.4
PPM= Parts Per Million; PPB=Parts Per Billion; CONF=Confirmed; LOQ=Limit of Quantitation; BDL=Below detection Limits: this analyte was not detected using the standard analytical methods employed by OISC; BQL=Below quantification limits: this analyte was detected however the amount was lower than the quantification limit established using the standard analytical methods employed by OISC * Result reported as Minimum Detected due to concentration exceeded calibration curve range.								
LOQ (ppb)		Veg	2	0.2	0.2	125	10	0.7
LOQ (ppb)		Soil	0.2	0.2	0.2	125	10	0.3
Signature			Date	12/09/19				

9. All analytes were detected in the target soil. Dicamba analytes were detected in all soybean samples with higher concentrations in the samples collected closer to the target field. The evidence at the site, the lab reports and the wind conditions reported by Mr. Miller, which were confirmed at the airport, suggest dicamba from the application to the target field moved off-target to the Miller soybeans. Without the detection of a tank mix partner, it is difficult to determine whether dicamba moved off-target due to application into an inversion or volatility at some point after the application. Regardless, based on the information provided by Mr. Ridenour, the application was made while winds were blowing toward the sensitive non-DT soybeans in the Miller field.

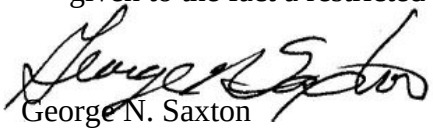
10. The Engenia label reads, in part, **"DO NOT apply when wind is blowing in the direction of neighboring sensitive crops or residential areas."**



Andrew R. Roth
Investigator

Date: December 12, 2019

Disposition: Matthew Ridenour was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was Mr. Ridenour's first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.



George N. Saxton
Compliance Officer

Draft Date: January 22, 2020
Case Closed: February 17, 2020

CASE SUMMARY

Case #PS19-0409

Complainant: Ottis Buroker
1875 S. CR500 West
Marion, IN 46953

Respondent: Mark A. Glessner — Private Applicator
6729 W. CR250 South
Swayzee, IN 46986

1. On July 26, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a dicamba application made to a neighboring farm field drifted onto his Liberty Link soybeans.

2. On July 26, 2019, I spoke with Ottis Buroker who reported he recently noticed leaf-cupping across one of his non dicamba-tolerant (DT) soybean fields on the east side of CR600 West in Grant County. He indicated several fields adjacent to his field were planted to DT soybeans, one of which was farmed by Mark Glessner.

3. On July 29, 2019, after completing an on-site investigation in the area, I met with Mr. Buroker at his farm. He explained that, since we spoke, he discovered leaf-cupping on soybeans in some of his other fields so he may have additional complaints. I informed Mr. Buroker that I would start the following day by investigating the original complaint.

4. On July 30, 2019, during my on-site investigation at the Buroker field, I did the following:

    a) Looked for and identified several potential sources of dicamba adjacent to the Buroker soybean field. The target field in this case (Glessner) abutted the south side of the western portion of the Buroker field along CR600 West (Fig.1). There was no fence line or biological barrier separating crops.
    b) Observed and photographed mostly-uniform, widespread cupping and puckering of leaves on non-DT soybean plants across the western portion of the Buroker soybean field. These symptoms are commonly associated with exposure to a growth-regulator type herbicide such as dicamba.
    c) Collected soybean plant samples from the Buroker field for assessment by the Plant & Pest Diagnostic Lab (PPDL) at Purdue.
    d) Collected four gradient plant samples from soybeans exhibiting symptoms across the Buroker field from south-to-north; samples were collected at 400-foot increments. Collected a soil sample from the north end of the target (Glessner) field, several rows into the field from CR600 West. Those samples were submitted to the OISC Residue Lab for analysis. *It should be noted that the samples collected from the Buroker field are representative samples and may be referenced in other investigations at the site.*

Fig.1 Aerial photo of fields


Fig.2 Border of abutting fields


Fig.3 Cupped non-DT soybeans

5. On July 30, 2019, I contacted Mr. Glessner and informed him of the complaint. He noted there were several fields in the area planted to DT soybeans which were likely sprayed with dicamba. Mr. Glessner stated that he was hiring out his dicamba applications this year. The private applicator permit of his employee, Greg Comer, was suspended by the OISC for the 2019 growing season. He reported that his field was sprayed with Roundup (glyphosate) only on July 10 and added that there were still some weeds in the field. Mr. Glessner stated he had been walking some of his fields, hand-spraying weeds with Xtendimax (dicamba). I asked if this particular field was one which he had hand-sprayed and he replied that it was. I instructed Mr. Glessner to make note of that on the Pesticide Investigation Inquiry (PII) which I had emailed him to complete and return.

6. On August 9, 2019, I notified Mr. Glessner that the OISC received complaints regarding possible off-target movement of dicamba from one of his fields on CR900 West in Grant Co. I sent another PII for that application. A week later, after making several attempts to contact Mr. Glessner, I received a message which indicated he was out of town until August 22.

7. On September 10, 2019, I messaged Mr. Glessner regarding the need for his application information. Two days later, I was able to speak to Mr. Glessner on the phone, at which time he stated that he would work on the forms over the weekend and send them to the OISC. As of December 17, 2019, the OISC had not received the PIIs or any other information from Mr. Glessner. The PII clearly states to return the completed form within fifteen (15) days.

8. The PPDL report indicated, *"Soybeans show injury symptoms consistent with exposure to dicamba."* It further stated, *"Septoria brown spot was present on lower leaves. No other significant disease or insect problem found."*

Andrew R. Roth
Investigator

Date: December 17, 2019

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.

George N. Saxton
Compliance Officer

Draft Date: January 6, 2020
Case Closed: February 10, 2020

CASE SUMMARY

Case #PS19-0453

Complainant: Cameron T. Mills
4881 South 850 East
Walton, Indiana 46994

Respondent: Ryan James Allbaugh **Private Applicator**
2831 South 350 East
Bringhurst, Indiana 46913

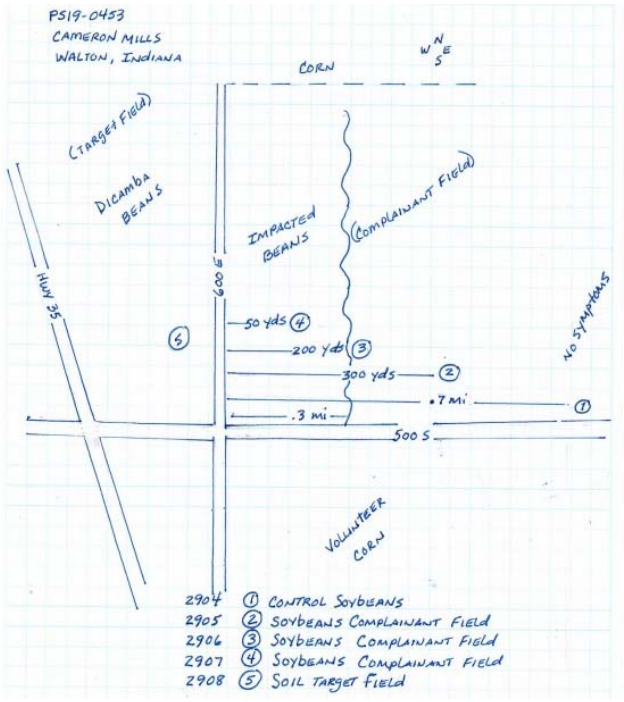
1. On August 5, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a dicamba application to a neighboring field has adversely affected his non-DT beans.

2. On August 12, 2019, I met with the complainant Cameron Mills at his field site located at the corner of 600 east and 500 south in Walton, Indiana. Mr. Mills told me he believed a pesticide application made to the west by Allbaugh Farms adversely affected his non-dicamba tolerant soybeans. I checked Mr. Mills' soybean field. I observed the soybeans exhibited pesticide exposure type symptoms of cupping and puckering. The symptoms appeared to decrease the farther away from the target field suggesting a drift pattern. (See photos below)

3. I obtained soybean plant samples from the complainant's field for submission to the Purdue Plant and Pest Diagnostic Lab (PPPDL) for analysis.

4. I placed the following environmental samples in Mylar bags for submission to the OISC Residue Lab for analysis: (See diagram below):

2904	control soybeans	2905	soybeans- complainant field
2906	soybeans- complainant field	2907	soybeans- complainant field
2908	soil target field		



5. I made contact with Allbaugh Farms. I learned Ryan Allbaugh made a pesticide application to the farm field west of the complainant's farm field. Ryan Allbaugh agreed to provide me with a completed Pesticide Investigation Inquiry (PII) for the application information.

6. I received the following information from PPPDL: "*This samples shows dicamba symptoms. Soybean plant material show symptoms of leaf crinkling, cupping and white leaf tips, which is associated with potential growth regulator exposure. Disease is not suspected to cause aforementioned symptoms. There are chlorotic angular spots that become necrotic over time found lower in the canopy. Septoria, causal agent of brown spot of soybean, is observed to be growing within the necrotic tissue*."

7. I received a completed PII from applicator Ryan Allbaugh. The PII had the following information:

   - **Certified Applicator**: Ryan James Allbaugh
   - **Application date and time**: July 19, 2019 from 2:10pm- 4:35pm
   - **Pesticides Used**: **Fexapan** (EPA #352-913; active ingredient: dicamba)
     Abundit Edge (EPA #352-922; active ingredient: glyphosate)
   - **Adjuvants:** Astonish and Capsule
   - **Target Field**: Lynn Home Farm
   - **Pre or post Application**: Post
   - **Wind direction at start time**: SE **at end time**: SE
   - **Wind speed at start time**: 5 mph **at end time**: 8 mph
   - **Method or equipment**: I-phone for local weather data and Kestrel wind meter
   - **Nozzles**: Turbo Tee Jet 11005
   - **Boom Height**: 20"
   - **Downwind Buffer**: 120 feet
   - **Date DriftWatch checked**: March 6, 2019
   - **Date registrant's website checked for approved tank mixes**: July 17, 2019
   - **Date and city dicamba training received**: March 6, 2019 in Tipton, Indiana

8. The weather data I obtained from the **National Climate Data Center (NCDC)** at **ncdc.noaa.gov** confirmed the weather information provided by applicator Ryan Allbaugh:

   - Grissom Air Force Base located in Peru (4 miles east of site) recorded the wind blowing at 10 miles per hour in an east to southeast direction toward the complainant's field at the time of application
   - Logansport Municipal Airport located in Logansport (8 miles northwest of site) recorded the wind blowing at 6 miles per hour in an east to southeast direction toward the complainant's field at the time of application
   - Kokomo Municipal Airport located in Kokomo (14 miles south of site) recorded the wind blowing at 11 miles per hour in an east to southeast direction toward the complainant's field at the time of application.

9. I checked the labels for **Fexapan** and **Abundit Edge** regarding wind information at time of application. The **Fexapan** label reads in part, "***DO NOT APPLY*** *this product when the wind is blowing toward adjacent non-dicamba tolerant sensitive crops; this includes NON-Dicamba Tolerant Soybean and Cotton."*

10. The **Abundit Edge** label reads in part, "*Apply this product only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when the wind is blowing away from the sensitive areas).*

11. Based on available information (site observations, PPPDL report, PII information and weather data (wind information from three different triangulated airports)), Mr. Ryan Allbaugh was in violation of the **Fexapan** label by applying it *when the wind was blowing toward adjacent non-dicamba tolerant sensitive crops; this includes NON-Dicamba Tolerant Soybean*. He was in violation of the **Abundit Edge** label by failing to apply it *when the potential for drift to adjacent sensitive areas was minimal (e.g., when the wind was blowing away from the sensitive area*).

12. No residue samples were analyzed due to obvious label violations.

Kevin W. Gibson
Investigator

Date: December 18, 2019

Disposition: Ryan James Allbaugh was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $100.00 was assessed for this violation. Consideration was given to the fact this was his first violation of similar nature. Consideration was also given to the fact a restricted use pesticide was involved.

George N. Saxton
Compliance Officer

Draft Date: January 22, 2020
Case Closed: February 17, 2020

CASE SUMMARY

Case #PS19-0466

Complainant: Danny Nally
4279 N. CR600 West
Marion, IN 46952

Respondent: Mark A. Glessner — Private Applicator
6729 W. CR250 South
Swayzee, IN 46986

1. On August 7, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a dicamba application made to a neighboring farm field drifted onto his Liberty Link soybeans.

2. On August 8, 2019, I spoke with Danny Nally who reported leaf-cupping was visible across non dicamba-tolerant (DT) soybeans at a farm on the west side of CR900 West in Grant County. He indicated that multiple fields in the area, one of which was farmed by Mark Glessner, had been sprayed with dicamba-containing tank mixes.

3. On August 8, 2019, I met Mr. Nally at the affected field. He explained that he was advised to call the OISC by his fertilizer dealer after the leaf-cupping was discovered. Most of his soybeans were in the main field which wrapped around the homestead and was bordered on the north by CR300 North. There was also a smaller patch-field to the southeast (Fig.1).

4. During my on-site investigation, I did the following:

    a) Looked for and identified three potential sources of dicamba adjacent to the Nally soybean field. The target field in this case (Glessner) was south of the Nally field with a creek and wood line, ranging from 250-400 feet across, separating the two (Fig.1).
    b) Observed and photographed mostly-uniform, widespread cupping and puckering of leaves on non-DT soybean plants across the eastern portion of the Nally field. Symptoms were visible the length of the field from south-to-north. These symptoms are commonly associated with exposure to a growth-regulator type herbicide such as dicamba.
    c) Collected soybean plant samples from the Nally field for assessment by the Plant & Pest Diagnostic Lab (PPDL) at Purdue.
    d) Collected five gradient plant samples from soybeans exhibiting symptoms across the Nally field from south-to-north; four samples were collected from the main field at approximately 300-yard increments and another was collected from the smaller patch-field. Collected a soil sample and a vegetation sample (affected weeds) from the target (Glessner) field, several rows into the field from CR900 West. Those samples were submitted to the OISC Residue Lab for analysis. *It should be noted that the residue samples collected from the Nally and Glessner fields are representative samples and may be referenced in other investigations involving the fields.*

Fig.1 Aerial photo of fields


Fig.2 Cupping in patch-field


Fig.3 Patch-field, looking west


Fig.4 South end, main field


Fig.5 Cupped non-DT beans


Fig.6 Affected weeds, target field

5. On August 9, 2019, I notified Mr. Glessner of this additional complaint; I had informed him of a complaint at a different field the week prior (Case PS19-0409). During an earlier conversation, Mr. Glessner indicated he was hiring out his dicamba applications this year, but then said he had sprayed some himself. The private applicator permit of his employee, Greg Comer, was suspended by the OISC for the 2019 growing season. I emailed Mr. Glessner a Pesticide Investigation Inquiry (PII) for his application to the field, known as "Etchison", south of the Nally field and explained that he would need to complete one PII for each of his applications.

6. On August 14, 2019, I again messaged Mr. Glessner to inquire about the requested application information. He replied that he was out of town until August 22 and he did not have his application records. Mr. Glessner did report that he applied a tank mix containing Xtendimax, Roundup and Warrant on July 8.

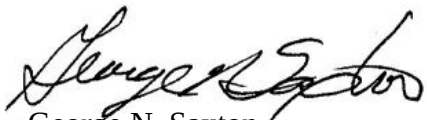
7. On September 10, 2019, I messaged Mr. Glessner regarding the need for his application information. Two days later, I was able to speak to Mr. Glessner on the phone, at which time he stated that he would work on the forms over the weekend and send them to the OISC. As of December 17, 2019, the OISC had not received the PIIs or any other information from Mr. Glessner. The PII clearly states to return the completed form within fifteen (15) days.

8. The PPDL report indicated, *"This sample shows dicamba symptoms."* It further stated, *"Soybean plant material shows symptoms of leaf crinkling, cupping, and white leaf tips, which is associated with potential growth regulator exposure. Disease is not suspected to play a role."*

Andrew R. Roth
Investigator

Date: December 17, 2019

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.



George N. Saxton
Compliance Officer

Draft Date: January 6, 2020
Case Closed: February 10, 2020

CASE SUMMARY

Case #PS19-0483

Complainant: Matt & Tom Moorman
7640 S. America Road
Wabash, IN 46992

Respondent: Mark A. Glessner — Private Applicator
6729 W. CR250 South
Swayzee, IN 46986

1. On August 9, 2019, Matt Moorman contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that Mark Glessner sprayed dicamba on a neighboring farm field that it drifted onto Roundup Ready soybeans.

2. On August 12, 2019, I spoke with Mr. Moorman who reported leaf-cupping was observed across non dicamba-tolerant (DT) soybeans in a field his family farmed on the east side of CR900 West in Grant County. He indicated he believed the dicamba application was made to the Glessner field, across the road, approximately two weeks prior.

3. On August 12, 2019, I met Mr. Moorman to discuss the complaint prior to going to the field. He indicated their Roundup Ready soybeans were commercially sprayed in mid-July. The leaf-cupping on the non-DT soybeans was reportedly first noticed by an employee of the commercial application company who then notified the Moormans.

4. On August 13, 2019, during my on-site investigation, I did the following:

   a) Looked for and identified two potential sources of dicamba adjacent to the Moorman soybean field. The target field (Glessner) in this case was directly across the road to the west of the Moorman field (Fig.1).
   b) Observed and photographed mostly-uniform, widespread cupping and puckering of leaves on non-DT soybean plants across the western portion of the Moorman field. Symptoms were visible the length of the field from south-to-north. These symptoms are commonly associated with exposure to a growth-regulator type herbicide such as dicamba.
   c) Collected soybean plant samples from the Moorman field for assessment by the Plant & Pest Diagnostic Lab (PPDL) at Purdue.
   d) Collected four gradient plant samples from soybeans exhibiting symptoms across the Moorman field, from west-to-east, at 400-foot increments. Those samples were submitted to the OISC Residue Lab for analysis. A soil sample and a vegetation sample (weeds) were collected from the Glessner field as part of a separate investigation the week prior (Case PS19-0466). *It should be noted that the gradient samples collected from the Moorman field and the samples collected from the Glessner field are representative samples and may be referenced in other investigations involving the fields.*

Fig.1 Aerial photo of fields


Fig.2 Cupping across non-DT soybeans


Fig.3 Cupping, puckering of leaves


Fig.4 Affected weeds in target field

5. On August 9, 2019, I notified Mr. Glessner of this additional complaint; I had informed him of a complaint at a different field the week prior (Case PS19-0409). During an earlier conversation, Mr. Glessner indicated he was hiring out his dicamba applications this year, but then said he had sprayed some himself. The private applicator permit of his employee, Greg Comer, was suspended by the OISC for the 2019 growing season. I emailed Mr. Glessner a Pesticide Investigation Inquiry (PII) for his application to the field, known as "Etchison", west of the Moorman field and explained that he would need to complete one PII for each of his applications.

6. On August 14, 2019, I again messaged Mr. Glessner to inquire about the requested application information. He replied that he was out of town until August 22 and he did not have his application records. Mr. Glessner did report that he applied a tank mix containing Xtendimax, Roundup and Warrant on July 8.

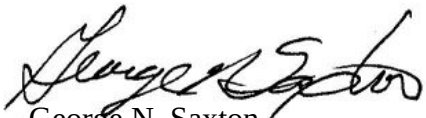
7. On September 10, 2019, I messaged Mr. Glessner regarding the need for his application information. Two days later, I was able to speak to Mr. Glessner on the phone, at which time he stated that he would work on the forms over the weekend and send them to the OISC. As of December 17, 2019, the OISC had not received the PIIs or any other information from Mr. Glessner. The PII clearly states to return the completed form within fifteen (15) days.

8. The PPDL report indicated, "*Soybeans show injury symptoms consistent with exposure to dicamba.*" It further stated, "*There was no evidence of significant disease found.*"

Andrew R. Roth
Investigator

Date: December 17, 2019

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.



George N. Saxton
Compliance Officer

Draft Date: January 6, 2020
Case Closed: February 10, 2020

CASE SUMMARY

Case #PS19-0493

Complainant: Tim Highley
3295 N. CR900 West - 27
Converse, IN 46919

Respondent: Mark A. Glessner — Private Applicator
6729 W. CR250 South
Swayzee, IN 46986

1. On August 12, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that a neighboring farmer applied dicamba to a field that drifted onto his non dicamba-tolerant (DT) soybeans.

2. On August 12, 2019, I spoke with Tim Highley who reported he observed leaf-cupping across an entire 10-acre field of Liberty Link soybeans on the east side of CR900 West in Grant County. He indicated the field was planted late and now is even more stunted.

3. On August 12, 2019, I met Mr. Highley at his farm to discuss the complaint. He indicated there were two fields, one of which was farmed by Mark Glessner, across the road to the west of his field, which may have been sprayed with dicamba.

4. On August 13, 2019, during my on-site investigation, I did the following:

   a) Looked for and identified two potential sources of dicamba adjacent to the Highley soybean field. The target field (Glessner) in this case across the road to the northwest of the Highley field.
   b) Observed and photographed mostly-uniform, widespread cupping and puckering of leaves on non-DT soybean plants across the Highley field. A home and barn occupied the northwest corner of the farm (Fig.1). Symptoms were more prominent on the west side of the field and on the north side where the field bordered another affected non-DT bean field farmed by Moormans (Case PS19-0483). These symptoms are commonly associated with exposure to a growth-regulator type herbicide such as dicamba.
   c) Collected soybean plant samples from the Highley field for assessment by the Plant & Pest Diagnostic Lab (PPDL) at Purdue.
   d) Collected four gradient plant samples from soybeans exhibiting symptoms across the Highley field, from west-to-east, at 250-foot increments. Those samples were submitted to the OISC Residue Lab for analysis. A soil sample and a vegetation sample (weeds) were collected from the Glessner field as part of a separate investigation the week prior (Case PS19-0466). *It should be noted that the gradient samples collected from the Highley field and the samples collected from the Glessner field are representative samples and may be referenced in other investigations involving the fields.*

Fig.1 Aerial photos of fields


Fig.2 Non-DT soybeans near road


Fig.3 Affected soybeans, west side

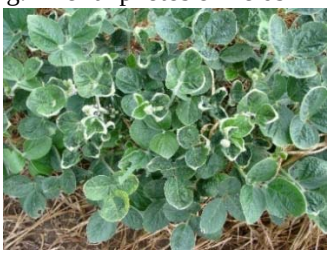


Fig.4 Leaf-cupping, west side


Fig.5 Affected fields, east of house


Fig.6 Affected plants, mid-field

5. On August 12, 2019, I notified Mr. Glessner of this additional complaint; I had informed him of three other complaints regarding his applications over the previous week. During an earlier conversation, Mr. Glessner indicated he was hiring out his dicamba applications this year, but then said he had sprayed some himself. The private applicator permit of his employee, Greg Comer, was suspended by the OISC for the 2019 growing season. I emailed Mr. Glessner a Pesticide Investigation Inquiry (PII) for his application to the field, known as "Etchison", northwest of the Highley field and explained that he would need to complete one PII for each of his applications.

6. On August 14, 2019, I again messaged Mr. Glessner to inquire about the requested application information. He replied that he was out of town until August 22 and he did not have his application records. Mr. Glessner did report that he applied a tank mix containing Xtendimax, Roundup and Warrant on July 8.

7. On September 10, 2019, I messaged Mr. Glessner regarding the need for his application information. Two days later, I was able to speak to Mr. Glessner on the phone, at which time he stated that he would work on the forms over the weekend and send them to the OISC. As of December 17, 2019, the OISC had not received the PIIs or any other information from Mr. Glessner. The PII clearly states to return the completed form within fifteen (15) days.

8. The PPDL report indicated, *"Soybeans show injury symptoms consistent with exposure to dicamba."* It further stated, *"There was no evidence of significant disease found."*

Andrew R. Roth
Investigator

Date: December 17, 2019

Disposition: Mark A. Glessner was cited for violation of section 65(7) of the Indiana Pesticide Use and Application Law for failure to make reports and supply information when required or requested by the state chemist in the course of an investigation or inspection. A civil penalty in the amount of $100.00 was assessed for this violation. In addition, all future license applications will be denied and no licenses will be issued until Mark A. Glessner complies with the records request. OISC received the civil penalty payment, however, no records have been received to date.

George N. Saxton
Compliance Officer

Draft Date: January 6, 2020
Case Closed: February 10, 2020

CASE SUMMARY

Case #PS19-0511

Complainant: Mark Schmaltz
1135 Bear Cub Drive
Cicero, Indiana 46034

Respondent: Rulon Enterprises — Pesticide Business
Roy K. Rulon — Certified Applicator
10701 East 281st Street
Arcadia, Indiana 46030

1. On August 14, 2019, the complainant contacted the Compliance Officer of the Office of Indiana State Chemist (OISC) to report that the local farmer made a pesticide application to a field that has drifted onto his ornamentals.

2. On August 16, 2019, I met with Mr. & Mrs. Schmaltz, who reported multiple trees and shrubs on their property were showing symptoms of herbicide injury. Mr. Schmaltz stated he believed the injury to the mixed ornamentals was caused by a pesticide application to a corn field located to the south of their property. Mr. Schmaltz stated their mixed trees and shrubs varied in age from approximately 1-3 years old.

3. Mrs. Schmaltz stated she observed the application to the field in question around the first week on June. Mrs. Schmaltz stated she remembered it was a windy day and she observed what she believed as spray particles coming from the sprayer and drifting towards her property. Mrs. Schmaltz stated she attempted to stop the applicator by standing in her backyard, near her property line, and began waving her arms. Mrs. Schmaltz advised while she was attempting to get the applicators attention, the spray particles from the sprayer made contact with her. Mrs. Schmaltz stated the applicator did not stop, completed the application, left the field, and never made contact with her. Mrs. Schmaltz stated after the application was completed, she used a garden hose to douse her shrubs and trees in effort to remove any pesticides that may have made contact with the vegetation. Mrs. Schmaltz stated she did not preserve her clothes that she advised was contacted by the pesticides.

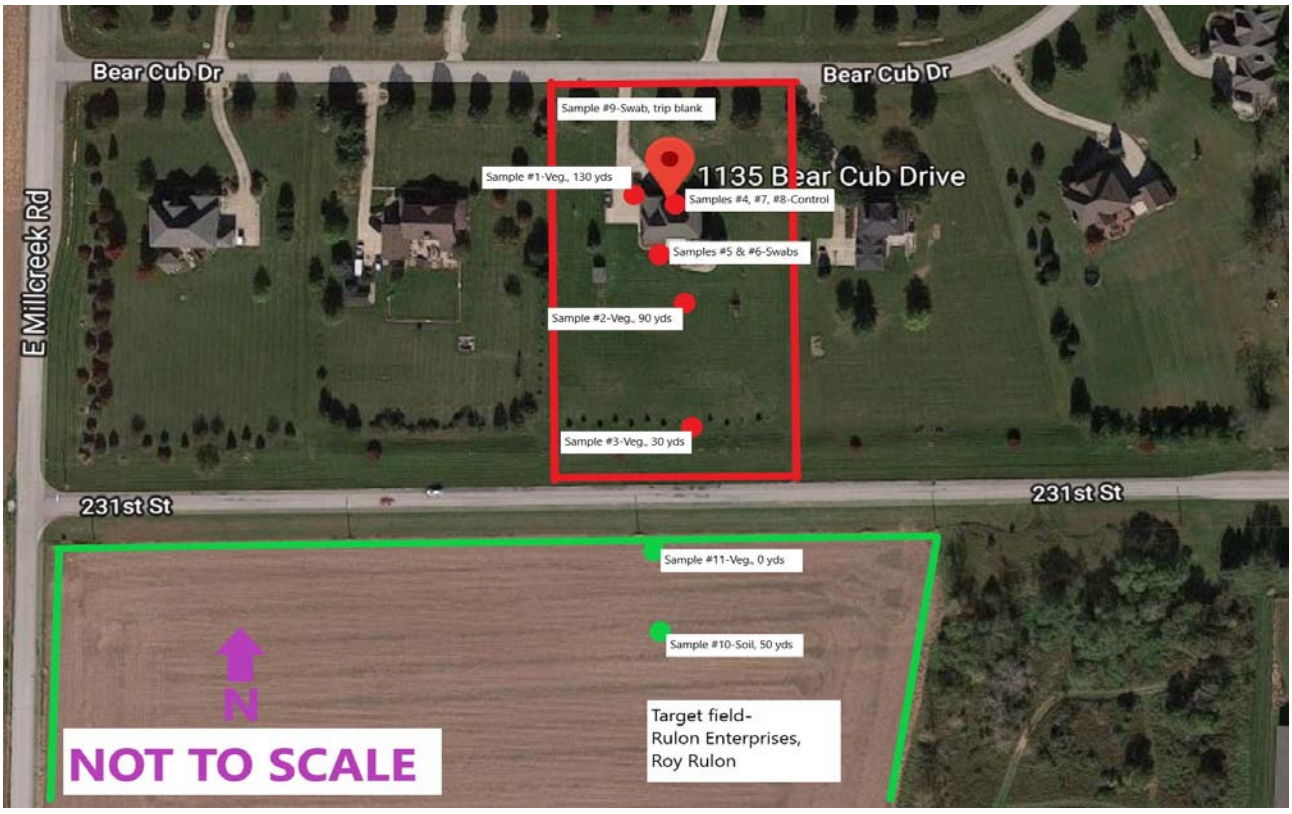
4. Mr. Schmaltz stated he had used Gordon's Trimec (EPA Reg. #2217-539-33955, active ingredients of 2,4-D, Mecoprop-p, and Dicamba) to spot treat the weeds in their lawn approximately two weeks prior to my arrival. Mr. Schmaltz stated there has been no other applications to their lawn or trees this year. Mr. Schmaltz stated they have been trying to transplant various types of ornamentals into their property over the past few years with many of them dying.

5. During my on-site investigation, I did the following:

   a. Observed and photographed possible symptoms of herbicide injury to the Schmaltz ornamentals. I observed several trees and shrubs on top of a small hill in the backyard

of the Schmaltz property (closest to the field) in various stages of health from being dead to some being completely healthy. Leaves of the shrubs were turning red in color and had some brown spotting. The Schmaltz property had maple trees scattered around their property. I observed a few of the maple tree's leaves to be yellowing around the edges, to have brown & black spots, and to be slightly curled while other maple trees on the property looked to be healthy with none of the above signs of injury. A dogwood tree near the front of the house had leaves with brown & red spots, yellowing around the edges, and appeared to have a leaf deformation. I did not observe a pattern of herbicide drift on the Schmaltz property.

b. Looked for potential sources of herbicide drift. I identified the field just south of the Schmaltz property, across from 231st Street, as the potential source of herbicide drift. I observed the field was planted in corn and observed evidence of a herbicide application by the field's dead or decaying vegetation. The field's edges were clean with no signs of drift coming from it.
c. Collected mixed vegetation exhibiting signs of injury from the Schmaltz property for assessment by the Purdue Plant Diagnostic Lab (PPDL).
d. Collected three gradient composite vegetation samples, swab samples from the windows of the residence, and a control vegetation sample from the Schmaltz property. A composite soil sample and a composite vegetation sample was collected from the south corn field. All samples were submitted to the OISC Residue Lab for analysis. See figure 1 for sample collection map.

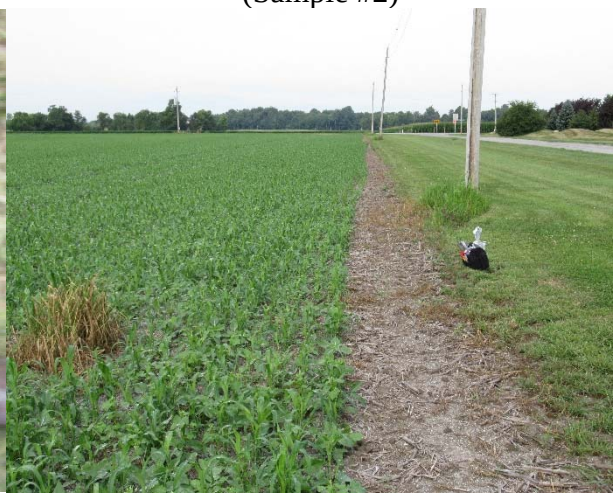


(Fig. 1-Sample collection map)

(Sample #1)

(Sample #2)

(Sample #3)



(North side of target field, facing west)

6. The target corn field was found to be treated by Rulon Enterprises. I made contact, via phone, with the applicator, Roy Rulon, who confirmed their treatment of the above field. Mr. Rulon was emailed a Pesticide Investigation Inquiry (PII) on August 16, 2019. On August 17, 2019, I received the completed PII with the following information.

    a. Certified Applicator: Roy Rulon
    b. Company name: Rulon Enterprises
    c. Application date and time: June 5, 2019, 11:15 AM-11:35 AM
    d. Wind speed & from which direction at start: 8-10 MPH, SSW
    e. Wind speed & from which direction at end: 8-10 MPH, SSW
    f. Pesticides:
        i. Resicore (EPA Reg. #62719-693, active ingredients of Acetochlor, Mesotrione, & Clopyralid)
        ii. Durango (EPA Reg. #62719-556, active ingredient of Glyphosate)
        iii. Amine 400 (EPA Reg. #2217-2, active ingredient of 2,4-D)
    g. Adjuvant: Array
    h. Target field: corn burn down
    i. Pre or post application: Pre

j. Method or equipment used to measure wind & temp: wind meter, handheld
k. Method or equipment used to determine if a temperature inversion existed: none

7. The PPDL report advised: *"There may be some glyphosate injury on some of the plants but the symptoms are not clearcut."* It further stated, *"Maple: This appears to be mainly potato leafhopper damage. Based on the photos this very young tree is also suffering from transplant stress, weed/grass competition and drought stress. Dogwood: The leaves are being distorted by powdery mildew rather than herbicide injury. The tree may also be suffering from growing in full sun in an exposed area. Cornus florida is better adapted to sheltered sites in the mid-West with some shade from afternoon sun. We have also seen much stress on trees this year due to root damage from the prolonged spring rains. Seven-bark: The spotting on the leaves is due to Cercospora leaf spot, a fungal disease. The photos also show evidence of grass/weed competition, drought stress and fungal dieback. I see no clear evidence of herbicide injury symptoms."*

8. The OISC Residue Lab advised:

OCM Collection #	111418	Investigator	TRIMBLEJ
Collection Date	08/16/2019		

Sample #	Sample Description	Matrix	Analyte	Amount of Analyte	LOQ
19-4-6566 1	Vegetation; Grab/Spot; 130 yds; Affected Site, Gradient 1;	Vegetation	AMPA	BDL ppb	125 ppb
			Glyphosate	BDL ppb	5 ppb
			Acetochlor	BDL ppb	1 ppb
			Mesotrione	BDL ppb	3 ppb
19-4-6567 4	Vegetation; Grab/Spot; 90 yds, small amount of sample; Affec	Vegetation	AMPA	BDL ppb	125 ppb
			Glyphosate	BQL ppb	5 ppb
			Acetochlor	1.76 ppb	1 ppb
			Mesotrione	BDL ppb	3 ppb
19-4-6568 8	Vegetation; Composite; 30 yde; Affected Site, Gradient 3;	Vegetation	AMPA	BDL ppb	125 ppb
			Glyphosate	59.5 ppb	5 ppb
			Acetochlor	3.48 ppb	1 ppb
			Mesotrione	3.75 ppb	3 ppb
19-4-6569 0	Vegetation; Control; n of house; Affected Site;	Vegetation	AMPA	BDL ppb	125 ppb
			Glyphosate	BDL ppb	5 ppb
			Acetochlor	BDL ppb	1 ppb
			Mesotrione	BDL ppb	3 ppb

19-4-6570 7	Swab (Acetone); Grab/Spot; back window; Affected Site;	Swab (Acetone)	Acetochlor	BDL ng/swab	2 ng/swab
			Mesotrione	BDL ng/swab	1 ng/swab
19-4-6571 1	Swab (Water); Grab/Spot; back window; Affected Site;	Swab (Water)	AMPA	BDL ng/swab	250 ng/swab
			Glyphosate	BDL ng/swab	10 ng/swab
19-4-6572 4	Swab (Acetone); Control; front window; Affected Site;	Swab (Acetone)	Acetochlor	BDL ng/swab	2 ng/swab
			Mesotrione	BDL ng/swab	1 ng/swab
19-4-6573 0	Swab (Water); Control; front window; Affected Site;	Swab (Water)	AMPA	BDL ng/swab	250 ng/swab
			Glyphosate	BDL ng/swab	10 ng/swab
19-4-6574 8	Swab (Acetone); Trip Blank; open air; Affected Site;	Swab (Acetone)	AMPA	BDL ng/swab	250 ng/swab
			Glyphosate	BDL ng/swab	10 ng/swab
			Acetochlor	BDL ng/swab	2 ng/swab
			Mesotrione	BDL ng/swab	1 ng/swab
19-4-6575 3	Soil; Composite; corn field, 50 yds; Target Site;	Soil	AMPA	530 ppb	50 ppb
			Glyphosate	206 ppb	5 ppb
			Acetochlor	2.03 ppb	1 ppb
			Mesotrione	1.64 ppb	0.7 ppb
19-4-6576 9	Vegetation; Grab/Spot; northeast corner, 0 yds; Target Site;	Vegetation	AMPA	606 ppb	125 ppb
			Glyphosate	18100 ppb	5 ppb
			Acetochlor	BDL ppb	1 ppb
			Mesotrione	BDL ppb	3 ppb

9. The above lab results advise a small amount of glyphosate, acetochlor, and mesotrione were found in sample #3 (19-4-6568 8) and Acetochlor in sample #2 (19-4-6567 4). No other samples collected from the Schmaltz property tested positive for the selected herbicides. The amount of glyphosate located in sample #3, 59.5 parts per billion (ppb), is slightly elevated compared to its baseline of 20 ppb but cannot be considered herbicide drift on that alone. The amount of acetochlor found in sample #3, 3.48 ppb, compared to sample #2, 1.76 ppb, is the only evidence of a down-wind gradient. The minimal amount of glyphosate found in sample #3, 59.5 ppb, when compared to the large amount found in sample #11 (19-4-6579 9), 18,100

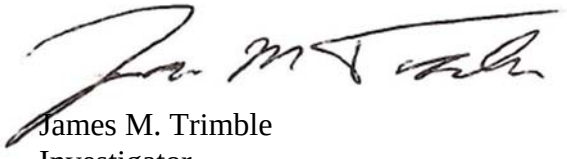
ppb, along with the short distance of approximately 30 yards between the two collection locations is evidence supporting drift did not occur.

10. The provided information regarding the application to the field in question show a wind speed of 8-10 MPH (within label requirements) and wind direction as blowing from the south, southwest (towards the Schmaltz property). The wind direction and speed was confirmed and not in question.

11. The Durango label states, **"Apply this pesticide only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).**

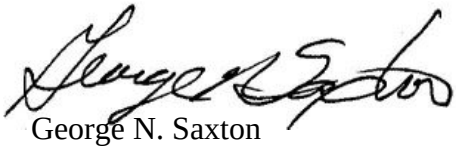
12. The Amine 400 label states, **"Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for non-target species, non-target crops) within 250 feet downwind."** The edge of the field to the shrubs and trees on the Schmaltz' property was measured at approximately 90 feet.

13. The OISC Residue Lab report combined with the PPDL report resulted in conflicting evidence that can't confirm that drift had occurred and caused harm to the Schmaltz' ornamentals but the application by Mr. Rulon of Durango and Amine 400 was found to be used in manner inconsistent with their labeling.



James M. Trimble Date: December 2, 2019
Investigator

Disposition: Based on the evidence collected in this investigation, it has been determined that Roy Rulon failed to comply with the drift management restrictions on the label for the herbicides Durango and Amine 400. It should also be noted that OISC was not able to determine whether the herbicide moved off-target as the result of drift, application into an inversion, or volatilization at some point after the application, and was not able to clearly identify the source of the off-target movement. Roy Rulon was cited for violation of section 65(2) of the Indiana Pesticide Use and Application Law for failure to follow label directions regarding drift management. A civil penalty in the amount of $250.00 was assessed for this violation. Consideration was given to the fact this was his second violation of similar nature. See case number 2017/0803.



George N. Saxton Draft Date: December 19, 2019
Compliance Officer Case Closed: February 4, 2020

CASE SUMMARY

Case #PS19-0586

Complainant: Office of Indiana State Chemist (OISC)
175 S. University Street
West Lafayette, IN 47907
765-494-1492

Respondent: Orion Safety Products
Rod Utter
3157 N 500 W, Building 2S
Peru, IN 46970

EPA Est. #92938-IN-1
Plant Manager

1. On August 5, 2019, Agent Joe Becovitz, Sarah Caffery and I performed a routine Producer Establishment Inspection (PEI) at Orion Safety Products in Peru, IN. A Notice of Inspection was issued and state credentials were presented to Rod Utter, General Manager. I explained that this was a routine not-for-cause inspection and that I would be inspecting repackaging agreements, inbound, production and distribution records, bin labels and any product that was packaged, labeled and ready for shipment.

2. According to Mr. Utter, Orion Safety Products Orion Safety Products is a pyrotechnic company specializing in production and distribution of distress signals. Currently Quick-Strike Mole & Gopher Gasser, EPA Reg# 36488-67, is the only registered pesticide product that Orion Safety Products produces. No other firms produce pesticide products for Orion Safety Products. Currently, Orion Safety Products also produces devices listed below:

    a. Orion Bear Deterrent Horn
    b. Orion Sight and Sound Bear Deterrent Shells with Launcher: US and Canadian labels
    c. Orion Pest Scare Launcher and Cartridges
    d. Sight and Sound Bear Deterrent replacement shells
    e. Pest Scare Replacement Cartridges

3. At the time of the inspection, it was unclear if the devices listed above were considered pesticide devices that fall into the purview of FIFRA, as one devices was a horn and the others were firearm style deterrents and accessories. Bin labels were collected for these products for further review, however, no other information was obtained in regards to these products.

4. Inbound, Production, and distribution records were examined for the Quick Strike Mole and Gopher Gasser. Production records did not contain a batch ID. Mr. Utter explained that only one run of production has been made for this product and no batch ID was created. The distribution records did not contain the name and address of the consignee or the originating carrier. Mr. Utter advised that the Mole and Gopher Gasser is produced for Victor Pest and that was the consignee.

5. Orion Safety Products does not import any pesticide products. Orion Safety Products does export the Sight and Sound Bear Deterrent Shells with Launcher to the Canadian market.

6. Quick Strike Mole and Gopher Gasser was only produced once and there was no stock on hand at the time of the inspection. A bin label was collected for this product and the other devices produced by Orion Safety Products.

7. I collected the following documents:

    a. Document 1- A bin label for Quick Strike Mole and Gopher Gasser, EPA Reg# 36488-67.
    b. Document 2- A copy of Inbound records for Quick Strike Mole and Gopher Gasser.
    c. Document 3- A copy of all production and distribution records for Quick Strike Mole and Gopher Gasser.
    d. Document 4- A bin label for Orion Bear Deterrent Horn.
    e. Document 5- A bin label for Sight and Sound Bear Deterrent.
    f. Document 6- A bin label for Sight and Sound Bear Deterrent, Canadian Label
    g. Document 7- A Bin label for Orion Sight and Sound bear Deterrent Shells Replacement Pack
    h. Document 8- A bin label for Pest Scare launcher and cartridges
    i. Document 9- A bin label for Pest Scare Replacement Cartridges.

8. Agent Sarah Caffery initialed and dated each of the documents.

9. Mr. Utter signed the Receipt for Documents. Mr. Utter was provided a copy of the Notice of Inspection and Receipt for Documents.

10. No other deficiencies were discussed during the closing conference with Mr. Utter. We then concluded the inspection.

11. On September 16, 2019, I contacted Ed White, OISC Assistant Pesticide Administrator, and inquired about the devices that Orion Safety Products produces. I provided him the bin labels. Mr. White stated he would contact EPA.

12. On September 26, 2019, I was advised by Mr. White that EPA did advise that the devices Orion Safety Products produces would be considered pesticide devices.

Garret A. Creason Date: October 15, 2019
Investigator

13. On November 8, 2019, I completed the label review for the products produced at Orion Safety Products.
    a. Quick-Strike Mole & Gopher Gasser, EPA Reg. #36488-67
    The following statement is misleading (per 40 C.F.R 156.10(a)(5)).

> The label states “See back panel for additional precautionary statements and first aid” and then does not provide the information on the back panel, but instead on the inside of the label.
>
> The back panel states “continued on inside…” at the bottom – but not directly that the first aid and precautionary statements are on the inside. Once looking at the inside panel, the statement “…continued from outside” starts above the “follow these instructions” heading, not the first aid and precautionary statements.

This review was confirmed by EPA.

b. The following were all determined to be pesticide devices.

i. Orion Bear Deterrent Horn
ii. Orion Sight and Sound Bear Deterrent Shells with Launcher: US and Canadian labels
iii. Orion Pest Scare Launcher and Cartridges
iv. Sight and Sound Bear Deterrent replacement shells
v. Pest Scare Replacement Cartridges

We do not have enough information to determine if there are any false or misleading claims. Based on the information below, the product is a pesticide device.

The definition of "device" in both FIFRA and our INDIANA PESTICIDE REGISTRATION LAW [I.C. 15-16-4-10] are nearly identical, describing a "device" as an instrument or contrivance intended for destroying, repelling, or mitigating any pest but excluding a firearm. ORION describes the gun-like instruments they produce as "launchers", not firearms. To add to this, a firearm, per Merriam-Webster, is defined as a weapon from which a shot is discharged by gunpowder. The Bureau of Alcohol, Tobacco & Firearms definition of "firearm" [18 U.S.C., §921(a)(3)] is the following:

> (3) The term “firearm” means (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive; (B) the frame or receiver of any such weapon; (C) any firearm muffler or firearm silencer; or (D) any destructive device. Such term does not include an antique firearm.

Based on these definitions, and through confirmation from EPA’s Device Determination Workgroup, the products are deemed to be pesticidal devices within the meaning of FIFRA. Although shaped like a gun, these products are designed specifically to repel pests, rather than launch a projectile to cause damage or injury to the target pest animal.

The devices do not require EPA registration. The device must bear the EPA Establishment number of the ORION facility where it is produced. ORION will need to report annual production of the device to EPA R-5. The device will require INDIANA registration as a pesticide product. See registration instructions at: https://www.oisc.purdue.edu/pesticide/pesticide_products.html

14. Review was only completed on the product/label that was found in distribution. Additional concerns might become apparent with review of application documents and websites.

Sarah K. Caffery — Date: December 3, 2019
Pesticide Product Registration Specialist

Disposition: Orion Safety Products was cited for five (5) counts of violation of section 57(1) of the Indiana Pesticide Registration Law for distributing pesticide products that were not registered for distribution in the state of Indiana. A civil penalty in the amount of $1,250.00 (5 counts x $250.00 per count) was assessed.

Orion Safety Products was cited for five (5) counts of violation of section 57(5) of the Indiana Pesticide Registration Law for distributing pesticide products that were misbranded. A civil penalty in the amount of $1,250.00 (5 counts x $250.00 per count) was assessed.

The total amount of civil penalty assessed in this investigation is $2,500.00. However, the civil penalty was reduced to $876.00. Consideration was given to the fact Orion Safety Products cooperated during the investigation; there was no previous history of similar nature; no potential for harm and a good-faith effort to comply.

George N. Saxton — Draft Date: December 19, 2019
Compliance Officer — Case Closed: February 4, 2020

CASE SUMMARY

Case #PS20-0037

Complainant: Office of Indiana State Chemist (OISC)
175 S. University Street
West Lafayette, IN 47907
765-494-1492

Respondent: Woodstream Corp
PO Box 8648
Lancaster, PA 17604-8648

1. On August 5, 2019, Agent Joe Becovitz, Sarah Caffery and I performed a routine Producer Establishment Inspection (PEI) at Orion Safety Products in Peru, IN. A Notice of Inspection was issued and state credentials were presented to Rod Utter, General Manager. I explained that this was a routine not-for-cause inspection and that I would be inspecting repackaging agreements, inbound, production and distribution records, bin labels and any product that was packaged, labeled and ready for shipment.

2. According to Mr. Utter, Orion Safety Products is a pyrotechnic company specializing in production and distribution of distress signals. Currently Quick-Strike Mole & Gopher Gasser, EPA Reg. #36488-67, is the only registered pesticide product that Orion Safety Products produces. No other firms produce pesticide products for Orion Safety Products. Currently, Orion Safety Products also produces devices listed in case PS19-0586

3. At the time of the inspection, it was unclear if the devices listed above were considered pesticide devices that fall into the purview of FIFRA, as one devices was a horn and the others were firearm style deterrents and accessories. Bin labels were collected for these products for further review, however, no other information was obtained in regards to these products.

4. Inbound, Production, and distribution records were examined for the Quick Strike Mole and Gopher Gasser. Production records did not contain a batch ID. Mr. Utter explained that only one run of production has been made for this product and no batch ID was created. The distribution records did not contain the name and address of the consignee or the originating carrier. Mr. Utter advised that the Mole and Gopher Gasser is produced for Victor Pest, Woodstream Corp, and that was the consignee.

5. Orion Safety Products does not import any pesticide products. Orion Safety Products does export the Sight and Sound Bear Deterrent Shells with Launcher to the Canadian market.

6. Quick Strike Mole and Gopher Gasser was only produced once and there was no stock on hand at the time of the inspection. A bin label was collected for this product and the other devices produced by Orion Safety Products.

7. I collected the following documents:

    a. Document 1- A bin label for Quick Strike Mole and Gopher Gasser, EPA Reg. #36488-67.

    b. Document 2- A copy of Inbound records for Quick Strike Mole and Gopher Gasser.

    c. Document 3- A copy of all production and distribution records for Quick Strike Mole and Gopher Gasser.

    d. Document 4- A bin label for Orion Bear Deterrent Horn.

    e. Document 5- A bin label for Sight and Sound Bear Deterrent.

    f. Document 6- A bin label for Sight and Sound Bear Deterrent, Canadian Label

    g. Document 7- A Bin label for Orion Sight and Sound bear Deterrent Shells Replacement Pack

    h. Document 8- A bin label for Pest Scare launcher and cartridges

    i. Document 9- A bin label for Pest Scare Replacement Cartridges.

8. Agent Sarah Caffery initialed and dated each of the documents.

9. Mr. Utter signed the Receipt for Documents. Mr. Utter was provided a copy of the Notice of Inspection and Receipt for Documents.

10. No other deficiencies were discussed during the closing conference with Mr. Utter. We then concluded the inspection.

11. On September 16, 2019, I contacted Ed White, OISC Assistant Pesticide Administrator, and inquired about the devices that Orion Safety Products produces. I provided him the bin labels. Mr. White stated he would contact EPA.

12. On September 26, 2019, I was advised by Mr. White that EPA did advise that the devices Orion Safety Products produces would be considered pesticide devices.

Garret A. Creason Date: December 3, 2019
Investigator

13. On November 8, 2019, I completed the label review for the products produced at Orion Safety Products.

    a. Quick-Strike Mole & Gopher Gasser, EPA Reg. #36488-67
    The following statement is misleading (per 40 C.F.R 156.10(a)(5)).

The label states “See back panel for additional precautionary statements and first aid” and then does not provide the information on the back panel, but instead on the inside of the label.

The back panel states “continued on inside…” at the bottom – but not directly that the first aid and precautionary statements are on the inside. Once looking at the inside panel, the statement “…continued from outside” starts above the “follow these instructions” heading, not the first aid and precautionary statements.

This review was confirmed by EPA.

14. Review was only completed on the product/label that was found in distribution. Additional concerns might become apparent with review of application documents and websites.

Sarah K. Caffery — Date: December 3, 2019
Pesticide Product Registration Specialist

Disposition: Woodstream Corp was cited for violation of section 57(5) of the Indiana Pesticide Registration Law for distributing a pesticide product that is misbranded. A civil penalty in the amount of $250.00 was assessed for this violation.

George N. Saxton — Draft Date: December 19, 2019
Compliance Officer — Case Closed: February 4, 2020