

Weighing



the Benefits and Effects of Neonicotinoid Use

October 25, 2017

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740-969-7384

Summary

1. Why is this issue important now?

The issue of conflict between neonicotinoid usage in agriculture and its adverse effects on the beekeeping industry is important now because neonicotinoids are a valuable tool used by agriculturalists to improve their agricultural products. However, neonicotinoids have been found to have negative effects on the bee population around the world. Bee pollination is vital to the production of quality agricultural products, as it is responsible for the fertilization of nearly one-third of the world's food supply (American Beekeeping Federation, n.d.).

2. What is the nature of the issue?

The issue has an astronomical affect on agriculture as a whole. As previously mentioned, neonicotinoids are utilized by agriculturalists to protect and maintain a successful yield for their crops. However, neonicotinoids can be lethal to bees and are leading to a decrease in beehive populations around the world. The decreased number of bees will be unable to maintain pollination for all crops and crop yields will drastically decrease resulting in a negative effect on both sides.

3. Who is involved in the issue?

The issue primarily involves apiculturists and agriculturalists as it directly relates to their livelihoods. However, because this issue relates directly to honey bees, it consequently involves the world's food supply, involving the world's population as a whole. Individuals who represent the agriculture industry, lawmakers and environmentalists are also involved in the decision-making processes regarding addressing this issue.

4. How can the issue be defined?

The issue can be defined as a conflict between two very important contributors in the agriculture industry, apiculturists and agriculturalists. Apiculturists are working to protect their beehives from major issues such as Colony Collapse Disorder (CCD) while agriculturalists are working toward producing a bountiful crop. Both want to produce their products in an efficient, sustainable, and economical way. Neonicotinoids are creating this conflict because of their negative effect on bees but their positive effect on agricultural yields and pest control.

5. What caused the issue?

This issue was caused by the growing recognition of declining bee populations and the evidence that the use of neonicotinoids are a major

contribution to this decline. Colony Collapse Disorder (CCD) is a condition that develops when a mass number of worker bees in a colony disappear. This issue may be easier to solve if the bees died in the hive but in fact, when this disorder takes place, they simply fly away and do not return leaving the hive with no chance of survival. As a result, neonicotinoid usage has taken some blame for the condition resulting in conflict about its use in agriculture.

6. What is the historical background of the issue?

Neonicotinoids have been used for nearly three decades and were created to replace older more damaging chemicals used in agricultural pesticides and insecticides. Since the introduction of neonicotinoids, producers have used the products to control pests and produce better yields with fewer impacts to the environment. However, some studies have shown these chemicals have contributed to the declining bee population caused by Colony Collapse Disorder (CCD).

7. Is there a strong disagreement on the issue?

Generally speaking, there is a strong disagreement concerning the issue. Apiculturists, and others involved in the beekeeping industry, feel strongly that the neonicotinoids should be banned from use on agricultural products because of their negative effects on beehive populations. In opposition, there are scientists, researchers, and agriculturalists who feel that neonicotinoids are not the main cause of Colony Collapse Disorder (CCD) and should continue to be used to advance the agriculture industry.

8. What are the risks?

If neonicotinoids are continued to be used, bees could continue to experience the negative effects and could die off at an alarming rate. This is a major issue especially because seven types of bees were recently added to the endangered species list. By the year 2050, the world population is estimated to peak nine billion people and without pollination from bees, the world's food supply will diminish. On the opposite end, reducing the use of neonicotinoids in agricultural pesticides and insecticides will result in producers either using chemicals more toxic to the environment or result in decreased yields of agricultural products.

9. What are the benefits?

Neonicotinoids are advantageous to agriculturalists, as they protect crops from pests in a beneficial way. Unlike other insecticides or pesticides, neonicotinoids fully absorb into the plant tissues. Subsequently, every part of the plant becomes poisonous to pests, making these chemicals very effective for crop producers.

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Documentation of Local Forums

When	Where	To Whom	Number Present
January 12 4 p.m.	Amanda, OH	The Ohio State University Communications Department Faculty	2
January 19 3:45 p.m.	Amanda, OH	U.S. Department of Agriculture, APHIS, Wildlife Services	1
January 24 4:30 p.m.	Amanda, OH	District 7 FFA Members	8
March 9 5 p.m.	Circleville, OH	Pickaway County OSU Extension	5
March 20 3:30 p.m.	Lancaster, OH	United Landmark LLC	5
March 23 4 p.m.	Amanda, OH	Marshall Grain	5
March 31 3:30 p.m.	Lancaster, OH	Fairfield County OSU Extension	5
March 31 4:45 p.m.	Lancaster, OH	Fairfield County Soil and Water District & Natural Resources Conservation Service	6
April 10 7 p.m.	Amanda, OH	Scioto Valley Beekeepers Association	3
April 10 7:45 p.m.	Amanda, OH	The Ohio State University Agronomy Department/Kroger Corporation	5
April 12 3:15 p.m.	Columbus, OH	Ohio House Representative Ron Hood	2
April 12 4 p.m.	Columbus, OH	Ohio Senator Troy Balderson	3
April 12 5 p.m.	Columbus, OH	Ohio Farm Bureau	3
April 12 6 p.m.	Columbus, OH	Central Ohio Beekeepers Association	7

Forums

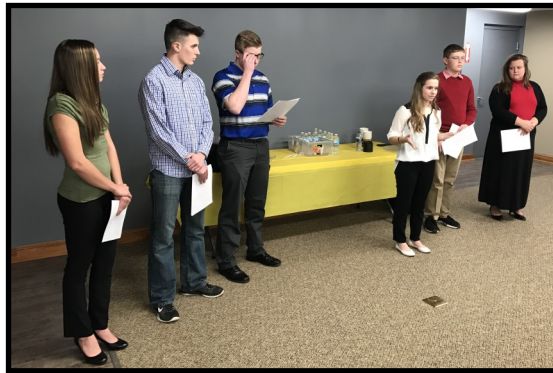
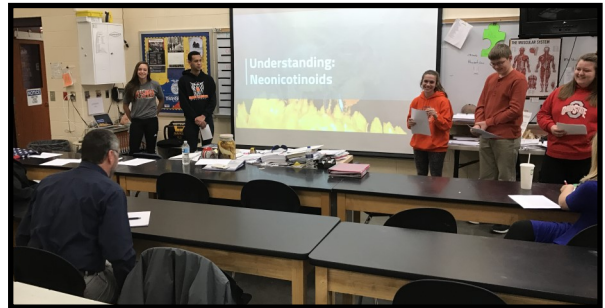


Tonya Forsythe, Ohio State University

In early January, team members gathered to collect insight from a faculty member of the Ohio State University Communications Department on how to convey our presentation in the most effective way.

Andy Montoney, Ohio State Director of Wildlife Services

In January, the team spoke with Andy Montoney, Ohio State Director of Wildlife Services about the prevalence of neonicotinoids in agriculture, specifically the pros and cons of the issue from the perspective of Montoney, who widened our understanding of the topic.



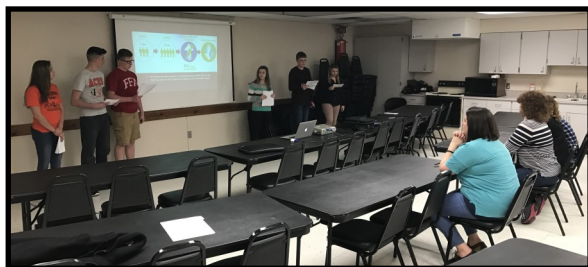
United Landmark LLC

During the monthly business meeting held at United Landmark LLC, the team members displayed their knowledge to seed salesmen and pesticide applicators and were able to gain feedback from people who have experience in this particular field of agriculture.

District 7 FFA Members

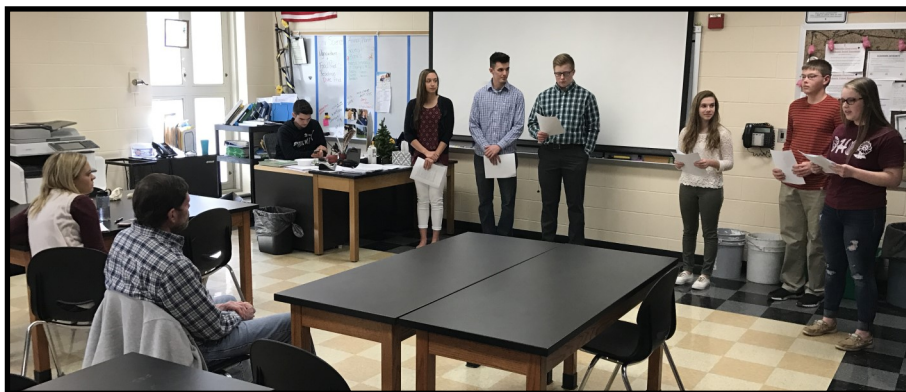
On January 24, various members from the District 7 Ag Communications CDE listened to the team speak about the issues regarding neonicotinoids to publicize the effects they have on the pollinator population and the agriculture industry.





Pickaway County OSU Extension

On March 9, the team presented to the Ohio State University Pickaway County Extension Office members, followed by a discussion about the research performed by the team and further opportunities for learning about neonicotinoids at a local level.



Barry Marshall, Marshall Grain

The team met with Barry Marshall, owner of Marshall Grain LLC, located in Amanda, Ohio, and discussed how the use of neonicotinoids affect the grain industry locally.



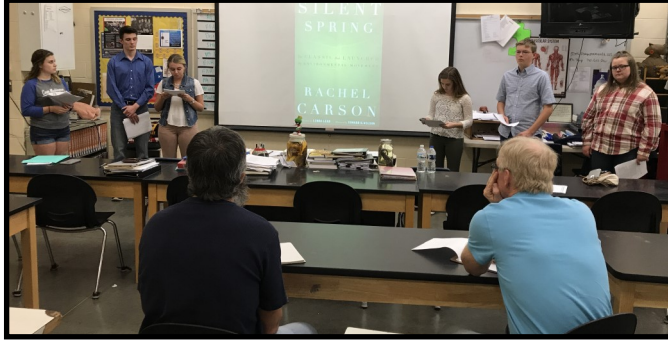
Fairfield County OSU Extension

The team met with employees of the Ohio State University on March 31 to bring the issue of neonicotinoids to a larger scale extension office to extend this information to the agricultural community and gain a better understanding ourselves.

Fairfield County Soil and Water District & Natural Resources Conservation Service

On March 31, the Agricultural Issues team presented the topic of neonicotinoids to the Fairfield County Soil and Water District & Natural Resources Conservation Services, where the team gained knowledge about the effects of neonicotinoids on local resources.



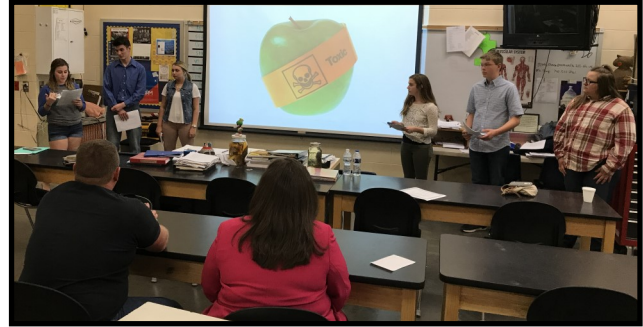


Scioto Valley Beekeepers Forum

The team presented the issue to members of the Scioto Valley Beekeepers Association in order to better their knowledge on the topic and gain insightful knowledge about the beekeeping side of the issue.

Ohio State University Agronomy and The Kroger Corporation

On April 10 the team was able to meet and present the issue to an OSU employee and a Kroger Incorporation employee in order to better understand both sides of the issue.



Ohio Representative Ron Hood

The team was able to discuss this very prevalent topic with a member of congress and explain to him both the positives and negatives of the issue.

Ohio Senator Troy Balderson

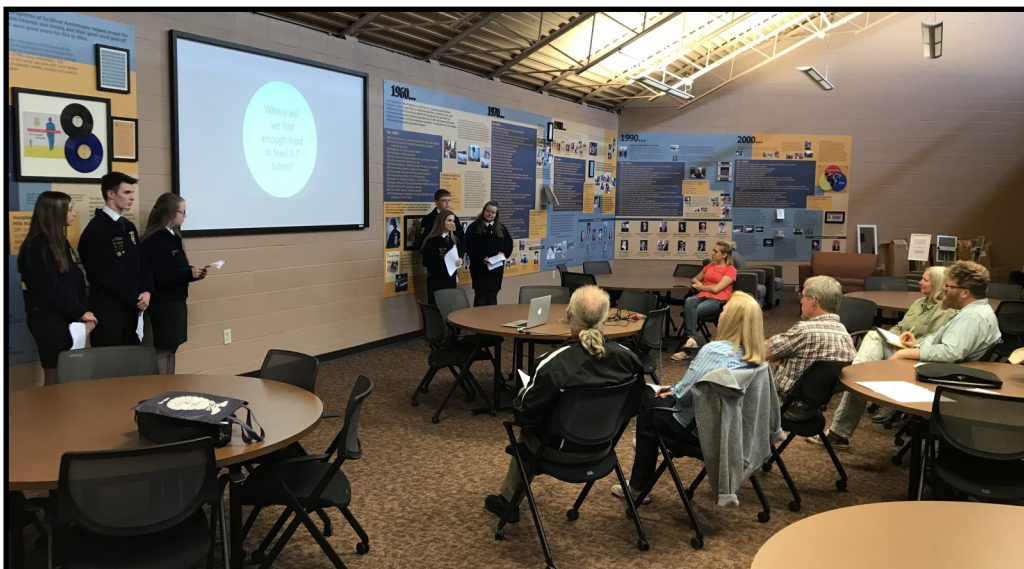
On April 12, the team explained the importance of neonicotinoids in agriculture, but also the negative effects that accompany them so his team could better understand this issue.





Ohio Farm Bureau

The Executive Vice-President of Ohio Farm Bureau agreed to meet with A-C FFA members and gave insightful information related to neonicotinoids, specifically how they affect the ag industry.



Central Ohio Beekeepers

On Wednesday, April 12, the team met with a group of Central Ohio Beekeepers to discuss the topic at hand, and receive opinions from individuals who have experienced the effects associated with Colony Collapse Disorder.

Ohio FFA Association – Career Development Event
Agricultural Issues Forum

Local Forum Documentation Sheet

Team Name: Amanda-Clearcreek FFA
District: 7

Presentation of 5 High Quality Forums to local community groups

1. Name of Group: Ohio State University Comm. Dept. faculty
Number of individuals observing the Forum Presentation: 2
Time and Location for Forum Presentation: Jan. 12, 2017 AC Ag Dept.
Signature of group member: Simon Jansz

2. Name of Group: U.S. Dept. Agriculture, APHIS, Wildlife Services, State
Number of individuals observing the Forum Presentation: 1
Time and Location for Forum Presentation: Jan. 19, 2017 AC Ag. Dept.
Signature of group member: Ad J. Montoney, State Director

3. Name of Group: District 7 FFA members
Number of individuals observing the Forum Presentation: 8
Time and Location for Forum Presentation: 1-24-17 A-C Ag. Dept.
Signature of group member: Tom Hoke

4. Name of Group: Pickaway County OSU Extension
Number of individuals observing the Forum Presentation: 5
Time and Location for Forum Presentation: 4:00 3/9/17 Circulae office
Signature of group member: Eileen Gorman

5. Name of Group: United Lardom LLC
Number of individuals observing the Forum Presentation: 5
Time and Location for Forum Presentation: 5:30pm 3/20/17 Lancaster office
Signature of group member: Ad J. Montoney

Ohio FFA Association – Career Development Event
Agricultural Issues Forum

Local Forum Documentation Sheet

Team Name: Amanda-Clearcreek FFA
District: 7

Presentation of 5 High Quality Forums to local community groups

1. Name of Group: Senator Tray Balderson
Number of individuals observing the Forum Presentation: 3
Time and Location for Forum Presentation: 4-12-17 Ohio State House
Signature of group member: Rachael Maier

2. Name of Group: Congressman Ron Hood
Number of individuals observing the Forum Presentation: 2
Time and Location for Forum Presentation: 4-12-17 R.H.C. Center
Signature of group member: Robert Knisley

3. Name of Group: Ohio Farm Bureau
Number of individuals observing the Forum Presentation: 3
Time and Location for Forum Presentation: 4-12-17 Ohio Farm Bureau
Signature of group member: Alvin J. Shroy

4. Name of Group: Central Ohio Beekeepers
Number of individuals observing the Forum Presentation: 7
Time and Location for Forum Presentation: 4-12-17 Ohio FFA Center
Signature of group member: Ad J. Montoney

Ohio FFA Association – Career Development Event
Agricultural Issues Forum

Local Forum Documentation Sheet

Team Name: Amanda-Clearcreek FFA
District: 7

Presentation of 5 High Quality Forums to local community groups

1. Name of Group: Marshall Grain
Number of individuals observing the Forum Presentation: 5
Time and Location for Forum Presentation: 3-23-17 A-C High School
Signature of group member: Barry Marshall

2. Name of Group: Fairfield County OSU Extension
Number of individuals observing the Forum Presentation: 5
Time and Location for Forum Presentation: 3-31-17 Lancaster office
Signature of group member: Conner Smith

3. Name of Group: Fairfield County Soil and Water District + Natural Resources Conservation Service
Number of individuals observing the Forum Presentation: 6
Time and Location for Forum Presentation: 3-31-17 Lancaster office
Signature of group member: Wade Drake

4. Name of Group: Scioto Valley Bee Keepers
Number of individuals observing the Forum Presentation: 3
Time and Location for Forum Presentation: 4-10-17 AC Ag. Dept.
Signature of group member: Matthew Abate

5. Name of Group: The Ohio State University, Agronomy / Kroger Corporation
Number of individuals observing the Forum Presentation: 5
Time and Location for Forum Presentation: 4-10-17 A-C Ag. Dept.
Signature of group member: Jimmy McCork
John Mc Cormick

USDA

United States Department of Agriculture
Animal and Plant Health Inspection Service
Ohio Wildlife Services State Office
4400 Professional Parkway
Grovesport, OH 43125-0020
(614) 963-3444
(614) 836-5597 Fax

January 20, 2017

Scott Sharp
Amanda-Clearcreek FFA
328 East Main Street
Amanda, OH 43102

Mr. Sharp:

Thank you for inviting me to your Agricultural Issues forum on January 19, 2017. I was happy to provide my perspective as the Wildlife Services State Director on their topic "Neonicotinoids" and its relationship to colony collapse disorders.

Your students provided an outstanding presentation and were well versed in the subject. I thoroughly enjoyed the question and answer period immediately following and felt the students were very responsive to my questions and ideas.

I wish your students success in their competition but more over in their ability to increase their knowledge on an important environmental and agriculture related topic.

Sincerely,

Ad J. Montoney
Andrew J. Montoney
State Director/Wildlife Biologist