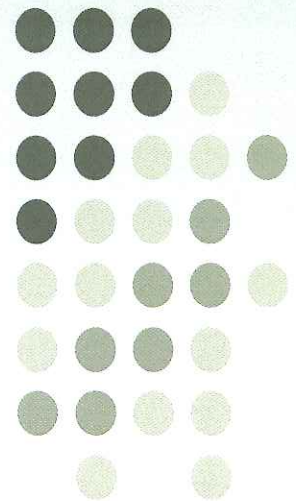
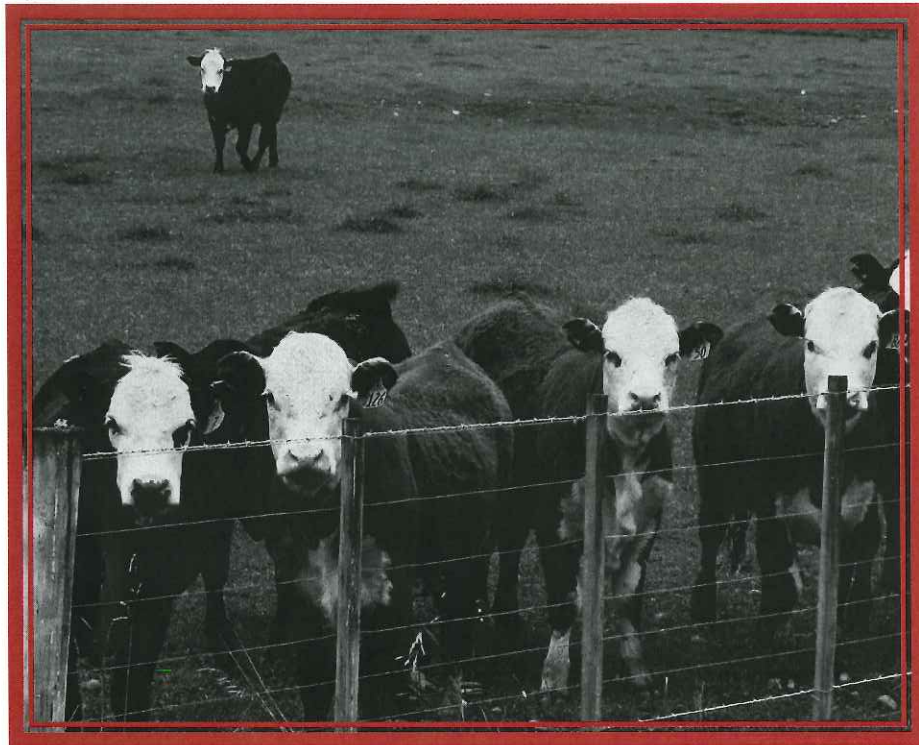


Agricultural Issues Forum 2013

Indiana State FFA Convention

June 18, 2013



Does natural gas hydraulic
fracturing impact cattle
production?



List course in which instruction occurred including the number of students involved in the instruction of the issue. ALS:

Animal Science: 48

Farm Business Management: 55

Fundamentals of Agriculture: 83

Landscape Management: 54

a. Why is this issue important now?

Energy is one of the most precious commodities our nation possesses. Natural gas extraction has started a controversy. The media and public have claimed that hydraulic fracturing, “fracking,” has been impacting the beef cattle industry through reproduction defects or deaths. Fracking has been emerging and heading toward eastern regions of the United States, where shale is prominent. Fracking is now occurring in over 30 states where shale and other rock formations promise a big yield of natural gas for personal, community, and industrial usage. One of the world's richest areas of natural gas is the Marcellus Shale formation, which stretches from West Virginia through Pennsylvania into New York. In 2011, over 16,000 new fracking wells were drilled in Pennsylvania alone. As our country becomes in dire need of a clean, green energy, this issue becomes more prominent. Conflict between natural gas corporations and cattle producers is changing. Case studies from Louisiana, Pennsylvania, New York, and Texas have reported that cows were and are dying from respiratory failure after an hour's exposure to spilled fracking fluid. The fracking industry is rapidly growing, and if fracking does have the negative effects that some claims have made, a course of action needs to be determined. Indiana's location is a prime target to such an industry, we could soon see hundreds of these wells.

b. What is the nature of the issue?

Numerous people are concerned about the safety of hydraulic fracturing and the environmental side effects. It is not certain whether fracking is the actual cause of these cattlemen's cases or if it is only a coincidence. This issue has caused an uproar within federal and state governments. Consistent regulations and supervision of fracking are absent at the Federal level. However, state governments do have regulations, but many want regulations made by Federal government. Because of implantation of new technology, the methods and regulations of fracking have become outdated, which is the base of this controversial debate. The main problem is that the cases of cattle mortality or defects can not be directly tied back to fracking. The media presents arguments based on assumptions and emotional ties to the public. The current status of this issue can be defined as an increase in an affordable, energy alternative with methods that concern portions of the public and has a limited amount of regulations at the federal level.

c. Who is involved in the issue?

Natural gas is an extensive industry that many people and companies depend upon. Natural gas companies such as Franklin Natural Gas and Oil Company are required to meet specific regulations by Indiana state laws. Politicians are vigorously working to have set regulations that coincide with farmers, natural gas companies, and the public's peace of mind. Livestock producers, land owners, and local residents are often left on the short end of hydraulic fracturing. Although generous compensation is offered to land owners, some say there is no materialistic value equivalent to their land or even safety of the farm, cattle, and family. The fracking industry employs many people from start to finish. Drilling requires many resources and materials in order to fracture the shale rock. Trucking, sand, chemicals, water, and engineering companies all assist natural gas companies in the all aspects of this issue.

d. How can the issue be defined?

Hydraulic fracturing requires wells to be set up for the extraction process. A single well can use up to 7 million gallons of water and up to 400,000 gallons of chemicals. According to the Cornell's “Impact of Natural Gas Drilling on Human and Animal Health” report, 75 percent of the 632 chemicals used in natural gas production are capable of affecting the skin, eyes, and other sensory organs. Studies further show that 25 percent could cause cancer and mutations. The apparent problem of this issue is lack of public awareness and knowledge of the by products of fracking. It is uncertain whether fracking and its chemicals are the actual cause of the cattle mortality cases. Issues arise with surface owners and mineral rights owners. . Most corporations buy out mineral rights from different owners instead of having several independent drilling applications.

e. What is the historical background of the issue?

Hydraulic fracturing was first used in 1947 to extract natural gas from the Hugoton field in Kansas. In 1974, Congress passed Safe Drinking Water Act to protect underground drinking wells. This also set regulations for hydraulic fracturing banning many fracturing fluids that were used in the wells. Almost forty years later, the EPA first reported on a water contamination. The report showed that fracking fluid had leaked from fractures in a well drilled by Kaiser Exploration and Mining Company and into a private water well. After this first report, the number of lawsuits and cases increased. As fracking increased in usage, so did public. The public is now starting to form their own opinion on whether fracking is a good source of energy or if it is just hurting the environment. Over the past six decades, hydraulic fracturing has helped deliver more than 600 trillion cubic feet of natural gas to American consumers, the product of more than 1.1 million separate and productive fracturing applications during that time.

f. What caused the issue?

There is a steady need for clean, and abundant natural gas supply. It is said by EPA that by 2035 natural gas will be 50 percent of our energy supply. Unfortunately, the media has caused negative attention to the fracking industry. Since 2000, in six different states, there have been twenty-four cases reported, where cattle were effected by fracking wastewater spills. Farmers with cattle in fracking areas have experienced complications in performance, birth, and even death have often blamed on the contaminated water. The media tends to point out the negative aspects in the hydraulic fracturing systems. In 2010, Josh Fox wrote and directed *Gasland*, an American documentary that does not support the practices of hydraulic fracturing. American's quickly took to Fox's side, and many were unwilling to see the potentials of the natural gas industry. With the media magnifying the negative effects of hydraulic fracturing, the slightest case of contamination causes immediate, negative public attention.

g. What are the risks?

The risks of fracking have been outlined from claims and lawsuits by farmers and residences in fracking areas. The claims usually start by ground water contamination due to chemical run off of the retention ponds that are used to hold the gallons of water used in fracking the well. This contamination effects the growth of the grass which the cattle and other livestock consume. The claims complain of livestock dropping weight, being born with birth defects, and even being stillborn. Because of the chances of gas drilling, some insurance companies even refuse to insure land if it is on natural gas lines. Many experienced cattlemen claim the effects of fracking contamination on the environment directly link back to the cattle industry. A loss of prime grass pasture limits the amount of forage a herd of cattle can consume. Hydraulic fracking can lead to the decrease in production of some roughage needed in a herd's basic diet.

h. What are the benefits?

The benefits of hydraulic fracturing can easily be seen in the economy. Whether consumers use oil, coal or electricity, we all need energy to live an ordinary life. Natural gas usage is on the rise due to its clean characteristics. Natural gas is the cheapest gas purchasable today. If a family would switch from electric and LP to natural gas, they could save \$1500 annually. This issue is bringing in more jobs to U.S. soil, while decreasing dependence on foreign oil. Hydraulic fracturing produces a product for consumers to buy that is affordable and efficient. In the times of economic downfalls, everyone is trying to get the most out of every penny. If it does not cause the upheaval of prime farm ground or small communities, hydraulic fracturing could wean America off the constant use of foreign oil, decreasing the amount of export money to other countries

Summary:

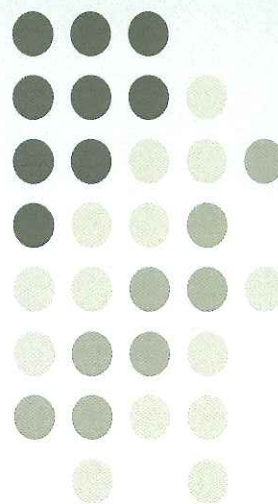
Natural gas hydraulic fracturing has aided in the process of providing Americans with a clean, affordable energy. Although if claims of cattle mortality continue, hydraulic fracturing throughout the United States could see increase regulations. As a nation we rely on our beef supply to feed our population, and energy to supply our society. There must be a way for hydraulic fracturing and cattle production to coincide.

References

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Agricultural Issues Forum 2013

Shenandoah FFA Chapter, Indiana



5100 North Raider Road
Middletown, IN 47356
Phone 765.354.2266
Fax 765.354.2274

To: FFA Agricultural Issues Team

From: Ron Green

Date: May 21, 2013

Re: Presentation of "Does Natural Gas Hydraulic Fracking Impact Cattle Production?"

Ms. Lovett and Agricultural Issues Team,

Thank you for your presentation to the School Board of Education at the May 20, 2013 meeting. Your expertise and professionalism will help this group to continue achieving honors and awards at the top level of competition.

The Board and Administration wish you the best of luck as you continue to present this controversial issue in competition. Thank you to the following students for your time and excellence:

Adrienne Trennepohl
Kathryn Pierce
Nathan DeYoung
McKenna Resler
Wyatt Bivens
Brittnee Bertram
Sydney Kirby

Respectfully,


Ron Green

Who: Shenandoah School Corporation (SSC), School Board Members and Guests

Where: SSC Administration Building

7354 West US 36

Middletown IN 47356

When: May 20, 2013

At 7:30pm.

Guests present: 9

Agricultural Issues Forum 2013 Shenandoah FFA Chapter, Indiana



Who: Henry County
Extension Board
Members

Where: Extension
Board Meeting Room.

Extension Office
New Castle, IN

When: May 21, 2013

At 4:30pm.

Guests present: 12

PURDUE
UNIVERSITY

Purdue University Cooperative Extension Service
Henry County
JUNE 3, 2013

Dear Melissa Lovett and the Shenandoah FFA,
Thank you for your recent Ag Issues presentation for our 4-H Association on May 22, 2013. We appreciate the opportunity to help support the Shenandoah FFA. The members enjoyed hearing about the issues coming up within Indiana agriculture and a great discussion was followed because of your presentation. Good luck with your state competition and please let me know if you need anything else.

Sincerely,

Bethany Ratts
Bethany Ratts
Extension Educator
4-H Youth Development, ANR
County Extension Educator

Melissa Lovett

From:
Sent:
To:
Cc:
Subject:

Halcomb, Jean - FSA, New Castle, IN <jean.halcomb@in.usda.gov>
Friday, May 17, 2013 4:14 PM
Melissa Lovett
Jacobi, Tamara - FSA, New Castle, IN
Ag Issues Presentation



Mrs. Lovett,

The Henry County Farm Service Agency enjoyed listening to the Shenandoah FFA students' Ag Issue Presentation on "Fracking" yesterday afternoon, Thursday, May 16 2013. We had 6 employees and 1 customer who were educated on hydraulic fracturing for natural gas extraction. The staff was informed of the pros and cons of this current agriculture issue.

Jean Halcomb
Program Technician
Henry County FSA
146 E County Road 200 N
New Castle, IN 47362

Phone: 765-529-2303 x 105
Fax: 765-521-8174
Email: jean.halcomb@in.usda.gov

Who: Henry County Soil & Water Office Staff

Where: Soil & Water Offices. New Castle, IN

When: May 16, 2013 At 4:30pm.

Guests present: 7

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Agricultural Issues Forum 2013 Shenandoah FFA Chapter, Indiana



Sulphur Springs Lions Club



May 25th, 2013

To Whom it may concern:

We would like to thank the Shenandoah FFA Agricultural Issues team for coming to the Sulphur Springs Lions Club and presenting their issue to us. It was very enjoyable for us to listen to and be educated by this team on Natural Gas Hydraulic Fracturing. I hope to hear of this team's success in the coming months as they compete with this great topic.

Sincerely,
Brian Becker



May 31, 2013

To Whom It May Concern:

At our May meeting, Henry County Council had the pleasure of hearing a presentation by the Shenandoah FFA Ag Issues Team. Having recently seen the film, "Promised Land," I found their presentation on natural gas hydraulic fracturing ("fracking") to be very interesting.

While I don't pretend to be a farmer, my wife and children and I have a small hobby farm, where we breed Shetland sheep. In addition, as our farm has three artesian wells, we know the likelihood of natural gas being beneath our land. Therefore, the presentation was of keen interest to me personally. It was also of great interest to my fellow County Council members, as some of us went up to the team members to ask them questions afterwards.

We greatly appreciated Ms. Lovett and her team taking time out of their busy end-of-year schedules to share with us.

Most sincerely,

Nate LaMar, President
Henry County Council (District 4)

Who: Henry County Council Meeting

Where: Henry County Courthouse.

New Castle, IN.

When: May 22, 2013 at 5:00pm.

Guests present: 15



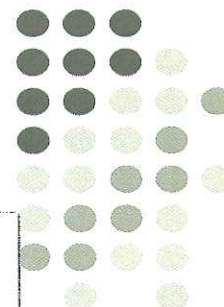
Who: Sulphur Lions Club

Where: Sulphur Community Building Sulphur Springs, IN

When: May 23, 2013

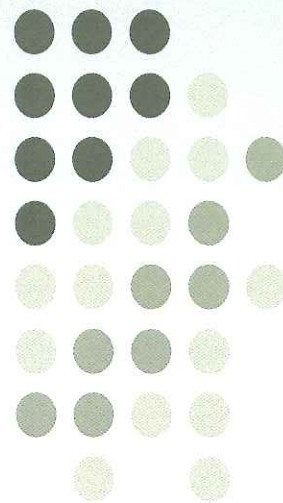
at 6:30p

Guests present: 10



Agricultural Issues Forum 2013

Shenandoah FFA Chapter, Indiana



Melissa Lovett

To:
Subject:

Melissa Lovett
RE: Shenandoah FFA Agriculture Issues Presentation

From: Hanebutt, Pete [mailto:phanebutt@infarmbureau.org]
Sent: Tuesday, May 28, 2013 10:59 AM
To: Melissa Lovett
Subject: RE: Shenandoah FFA Agriculture Issues Presentation

Melissa,
Your kids did a great job today! Thank you for sharing their views on hydraulic fracturing and its impact on the cattle industry. I think your students have a great handle on the facts vs the emotional opinion that happens with these types of issues. Best of luck in your competitions.

The two Purdue staff members that we reference are Wally Tyner (Ag Econ) wtyner@purdue.edu and Ron Lememager (AnSci) rl@purdue.edu.

Thanks,
Pete

This email is intended solely for the named addressee(s) and may be confidential or contain privileged information. Review, disclosure, copying, distribution, or use of this email by anyone other than an intended recipient is strictly prohibited. If you received this email in error, please delete it from your system and notify the sender immediately. While precautions have been taken to help ensure no computer viruses are present, there is a risk whenever transmitting emails or downloading attachments. The sender will not be liable for any loss or damage resulting from any malware in this communication or for improper or incomplete transmission of its contents or for any delay in its receipt.

Who: Indiana Farm Bureau
Associates

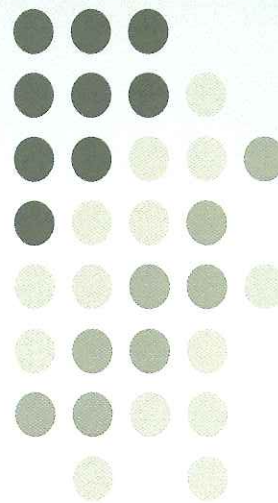
Where: IFB Corporate Offices
Indianapolis, IN.

When: May 28, 2013
At 9:00 am.

Guests present: 8

Agricultural Issues Forum 2013

Shenandoah FFA Chapter, Indiana



Elanco

Elanco Animal Health
2500 Innovation Way
Greenfield, IN 46140
317.278.2000

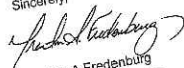
May 31, 2013

Agriculture Issues Forum Team
Shenandoah FFA
Shenandoah High School
7354 West US 36
Middletown, IN 47356

Dear Agriculture Issues Team,

Thank you for your visit to the Elanco Animal Health world headquarters in Greenfield, Indiana on May 28, 2013 at 2:00 pm. On behalf of Gary Fuller, Travis Fredenburg, Christian McKinnon, Jana Forester, Gary Szeszycki and myself, let me offer our congratulations on your willingness to take-on and execute such a challenging endeavor. You have researched your topic, natural gas tracking's impact on cattle production, well. Best of Luck at your upcoming convention. Thank you once again for your visit to Elanco Animal Health.

Sincerely,


Trenton A. Fredenburg
Global Cattle Marketing

Who: Elanco Animal Health

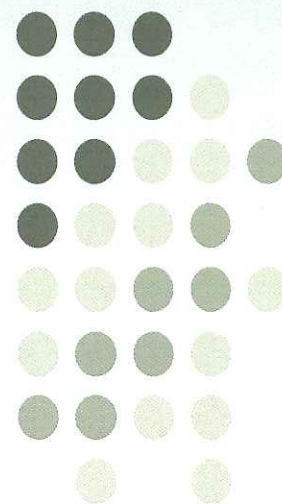
Where: Elanco Animal
Health World Headquarters
Greenfield, IN

When: May 28, 2013
at 2:00 pm.

Guests present: 6

Agricultural Issues Forum 2013

Shenandoah FFA Chapter, Indiana



INDIANA
STATE DEPARTMENT OF
AGRICULTURE

Indiana State Department of Agriculture
Governor Michael R. Pence
Lt. Governor Sue Ellspermann, Secretary of Agriculture and Rural Development
Gina Sheets, Indiana Agriculture Director

To Whom It May Concern,

The Shenandoah FFA Ag Issues Team did an excellent job presenting detailed information on the issue of "Does natural gas hydraulic fracturing impact cattle production?" to nine members of the Indiana State Department of Agriculture and the Indiana Department of Energy in the conference room on Wednesday 29 at 9:40 a.m. ISDA truly enjoyed the presentation of the issue and the question/answer phase at the end.

Steve Hickey
Indiana Department of Agriculture
Executive Director of FFA
1 North Capitol Suite 600
Indianapolis, IN 46204
TEL: (317) 407-7926
E-Mail: shickey@isda.in.gov

Who: Indiana State
Department of Agriculture &
Indiana Department of
Energy.

Where: 1. North Capital
Avenue, Indianapolis In

When: May 29, 2013

At 9:40am.

Guests present: 9

Agricultural Issues Forum 2013 Shenandoah FFA Chapter, Indiana

Who: Indiana Beef Cattle Association

Where: IBCA Corporate Offices
Indianapolis, IN

When: May 29, 2013 At 11:00am

Guests present: 5



INDIANA BEEF CATTLE ASSOCIATION
Serving Indiana Cattlemen Since 1964

May 31, 2013

Melissa Lovett
Agriculture Education / FFA
Shenandoah High School
Middletown, IN 47356

Dear Melissa,

Thank you again for bringing the Shenandoah FFA team to our office Wednesday, May 29, 2013. The presentation to our Indiana Beef Cattle Association staff on Hydraulic Fracturing was wonderful. The conviction each FFA member portrayed was convincing and their perspectives were well rehearsed.

I wish you continued success and please don't hesitate to contact me if we can ever be of future assistance.

Sincerely,

Jennifer C. Biesecker

Jennifer Biesecker
Executive Assistant & Special Events Coordinator
IBCA-IBC

3738 West 74th Street | Indianapolis, IN 46278 | (317) 203-4881 (2333) or (800) 333-4881
www.indianabeef.org



National FFA Center
6060 FFA Drive
P.O. Box 68960
Indianapolis, IN 46268-0960
Phone: 317-802-6060
Fax: 317-802-6061

The FFA Mission: FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

NATIONAL FFA ORGANIZATION

Dear Shenandoah FFA Agricultural Issues Team,

Thank you for presenting to the National FFA Organization at the National FFA Center on Wednesday, May 29, 2013 at 2:30 p.m. We greatly enjoyed your presentation "The Fracking Truth". The 16 National FFA staff members present not only had an opportunity to interact with outstanding members we also learned some interesting facts, figures and perspectives on hydraulic fracking.

Best of luck to your CDE team as you participate at the state convention!

Sincerely,

Katy MURRAY

Education Specialist
Enhancement Team
National FFA Organization

Who: National FFA Organization
Staff Members

Where: National FFA
Headquarters, Indianapolis
Indiana

When: May 29, 2013 At 2:00pm.

Guests present: 15

