

Should the FAA allow
farmers to fly drones
without approval...

or

Should they be
GROUNDED?

Kingfisher FFA Chapter
1500 S. 13th Street
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Oklahoma State FFA Qualifying Event: April 25, 2015

ISSUE SUMMARY

1. Courses in which instruction occurred and number of students involved in the instruction of the issue:

- Agricultural Explorations (18 students) - discovered the new innovations effecting the agricultural industry as well as presentation skills associated with presenting the issue to community members.
- Agriscience I (24 students) - learned about various aspects of crop and livestock production and new technologies which enhance the production of these food products.
- Agriscience II (11 students) - learned about the nature of politics in agriculture and economics in rural areas.
- Agricultural Communications (14 students) - acquired skills necessary to research local issues, conduct interviews, cite sources, and create a presentation to deliver to community groups.
- Agricultural Power and Technology (17 students) - learned how the mechanical system of Unmanned Aerial Vehicles works and discovered how to operate the remote control most efficiently.
- Photojournalism (21 students) - cooperated with the photography department and learned how to transfer personal UAV video coverage into YouTube videos and how to download onto mobile applications.

2. Why is this issue important right now?

Recent technological innovations are now allowing agriculturists to farm their land even more efficiently using Unmanned Aerial Vehicles, commonly referred to as drones. These small aircraft are currently being regulated by the Federal Aviation Administration. By law, operating these tiny aircraft in national airspace requires a certificated and registered aircraft, a licensed pilot, and specific approval (Section 333, n.d.). However, “Section 333 of the FAA Modernization and Reform Act grants the Secretary of Transportation the authority to determine whether an airworthiness certificate is required for a UAV to operate safely in the National Airspace System” (Section 333, n.d.). According to FAA guidelines, anyone operating a UAV must be authorized by the FAA via a Section 333 Grant, unless the flight is for hobby or recreational purposes (Section 333, n.d.). Even though commercial use of drones is widely banned in the United States, farmers continue to use them on their property to scout their crops, understand pest problems, monitor chemical and water use, and oversee their livestock (Kennedy, 2015). Therefore, the issue is important right now because agriculturists and the general public are confused about what the FFA regulations are, who is entitled to utilize a UAV, and who is required to petition for an exemption grant.

What is the nature of the issue?

The nature of this issue is centered around Agricultural Technology. Specifically, our forum focuses on the use of UAVs in the agricultural industry and whether or not agriculturists should be required to petition for a Section 333 grant from the FAA. Thousands of exemptions have already been granted by the FAA, and many of those are to agricultural businesses (Section 333, n.d.). However, many private citizens feel that their privacy is being compromised due to the large increase in UAV usage in the United States. Economically, the UAV industry could have a major impact on U.S. agriculture. It is estimated that 100,000 jobs could be created, and UAVs could have an economic impact of \$82 billion by 2025 (Meersman, 2015). At the same time, many have lobbied the FAA to create stricter drone regulations, fearing that too many people will use them and compromise the safety and privacy of U.S. citizens. It is even feared that the aircraft will get into the hands of animal rights groups who could damage the livestock industry (Dillard, 2013). If drones were more accessible to the agricultural industry, farmers could greatly benefit, but privacy remains an important issue. Without UAV technology, farmers could be losing a chance to become more efficient and sustainable (Meersman, 2015).

Who is involved in the issue?

Most directly effected are the **FAA employees** who are working to update and enforce UAV regulations and issue Section 333 exemption grants to thousands who petition them daily. Also, **local crop and livestock producers** are involved as they try to determine the legality of UAV use and discover the many ways the aircraft can impact their operations. Other producers are concerned that drones may be used by **animal rights extremists**. **Agribusinesses** such as P&K John Deere, Case IH, and American Drones who want this market are directly affected. Indirectly, **local citizens** are concerned about their privacy and the likelihood of accidents involving UAVs.



ISSUE SUMMARY *Continued*

How can this issue be defined?

This issue can be defined with the following question: “Should the FAA allow farmers to fly drones without approval?” The question has caused debate among both sides of the issue. Yes, allowing farmers to operate UAVs without the prior paperwork would ultimately increase the production of food for a growing population. According to the Association of Unmanned Vehicle Systems International, 80% of the commercial market for UAVs will eventually be for agricultural use (Dillow, 2015). However, the other side of the argument is that fewer regulations could lead to more abuse in the usage of the aircraft. Studies show that 52% of people believe that drones should be banned from private use (Tesla, 2014). Many of these citizens feel that regulations are confusing, and enforcing the law concerning the aircraft will be nearly impossible with such a large supply of them in our community. Should the FAA allow farmers to fly drones without approval? This issue will not be simple to resolve.

What is the historical background of this issue?

1849: One of the first recorded usage of drones in Austria

2000: CIA flies unmanned drones over Afghanistan

2002: RMAX dominated unmanned spraying in Japan

2012: HV-100 agricultural robot debuts (Tesla, 2014)

2013: “Economic Impact of UAV” report released

2014: FAA creates guidelines for non-commercial UAV flights (Busting myths about, 2015)

2015: Oklahoma legislation proposed concerning drone usage (Bennett, personal communication, 2015)

2015: FAA updates regulations for commercial UAVs (Section 333, 2015)

What caused this issue?

The issue of drone usage in Kingfisher was caused by the recent surge in UAV sales across rural Oklahoma. Many of these drones are now used privately for recreational purposes. However, there is a need to use them to make agricultural production more efficient, such as crop scouting and monitoring livestock. However, many citizens are concerned about their privacy with thousands of drones flying above their homes and farms. Even agriculturists are legitimately concerned that the small cameras mounted on the aircraft could be used by radical animal rights groups and cattle rustlers to harm their operations. Citizens are not sure that their small, quiet community is ready to accept this technological advancement, thus creating an issue within Kingfisher.

What are risks?

The following risks give opponents reasons to oppose the use of drones in the community:

- Hundreds of unsafe incidents have been reported to the FAA, and numbers are expected to increase.
- Improper use of drones is expected to increase, especially groups like PETA, who compromise the integrity of American agriculture.
- The FAA has many regulations for drone users to follow, yet not enough employees to regulate UAV use within the agricultural industry.
- Privacy is compromised, and updated FAA regulations do not address privacy.
- There is confusion concerning who must petition for Section 333 exemptions in order to legally fly drones.
- Possible interference with other agricultural practices, such as crop dusting, creates safety hazards.

What are benefits?

These benefits are being promoted by UAV supporters in the community:

- UAV technology could possibly increase crop yields by up to 10% and decrease input costs.
- The economic impact in the U.S. could be \$82 billion, with \$75 billion of that within the agricultural industry.
- 100,000 new jobs could be created by 2025.
- Remote sensors can scan crops for health problems, monitor hydration and growth rate, and locate disease problems, making agricultural production more efficient and sustainable.
- High quality digital photography and videography decreases manual labor.
- Natural resources, such as water and fertilizer, could be conserved with more efficient application.



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Interviews:

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- Clifton, Shane. (2015, February 1). P and K John Deere Equipment, Kingfisher, OK.
- Deterding, Greg. (2015, April 1). G and C Crop Care. Kingfisher, OK.
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- Nichol, Tom. (2015, February 12.) AgEagle Aerial Systems. Neodesha, KS.
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- Sanders, Mike. (2015, April 13). State Representative. District 59. Oklahoma House of Representatives. Oklahoma City, OK.

FORUM PRESENTATIONS

Name of Group	Date of Presentation	Number Present
G & C Crop Care	March 30, 2015	12
Kingfisher Rotary Club	April 3, 2015	24
Kingfisher Lions' Club	April 9, 2015	21
Kingfisher County Republican Women's Association	April 12, 2015	33
Kingfisher County Administrators Conference and Legislators	April 17, 2015	11
Kingfisher FFA Parents' Club	April 18, 2015	22
National Bank of Commerce Advisory Board	April 24, 2015	16
Oklahoma FFA State Interscholastic Contest	April 25, 2015	16

FORUM PRESENTATION: *G & C Crop Care*



To Whom It May Concern:

On March 30, 2015, I attended the presentation on drones by the Kingfisher FFA Agricultural Issues Forum Team. I enjoyed the presentation and thought it was well organized!

My name is Greg Deterding and I represent G & C Crop Care, and Aerial Ag Application business in Kingfisher Oklahoma

Thank you,

Greg Deterding



FORUM PRESENTATION: *Kingfisher Rotary Club*



Kingfisher Rotary Club Kingfisher, Oklahoma

Lori Burns
Kingfisher FFA Chapter
Kingfisher High School

April 3, 2015

This is to confirm that the Kingfisher FFA Ag Issues team presented their discussion on Drones at our club meeting March 31st, 2015.

Please thank those members on the team for their presentation. It is a very timely issue and they presented both sides fairly and accurately.

We appreciate you taking of your valuable time to make this presentation at our weekly meeting, it presents such a positive image for your FFA Chapter.

Sincerely,

Tom Garrett
Tom Garrett
Program Chairman

per Bomhoff, Daniel Ross, Ethan Schroeder, Stella Kriemhild and Casey, Yvan Chakam, Emily Sanders, Michael Smoot, Caramia Alexander, Thomas Phillips Harris, Zane Buck and Reid Tilton, and, back row, Madolin Meador, Evelyn Kalen McCarthy, Hannah Shepherd, Luz Pina and Tammy Jacobs, principal. To be in honor roll, students must achieve B's or better in all their classes. [Photo Provided]



KINGFISHER FFA Chapter Agricultural Issues Team presented a debate on drones at Rotary on Tuesday. Team members include, from left, Peyton Burns, Holly Barrow, Madelyn Gerkin, Taylor Chapman, Addison Themer, Emily Garrett and Jace Karns. [TIMES-FREE PRESS Staff Photo]

FFA Ag Issues Team debates the use of drones

The Kingfisher FFA Agricultural Issues Team impressed Rotary members Tuesday with their presentation debating the pros and cons of drones.

Prior to the presentation, Advisor Lori Burns explained the structure of the event. The seven member team selects an issue that is timely and affects local citizens. The FFA chapter is required to choose a different topic every year.

The team consists of a narrator, three protagonists and three antagonists. Team member, Holly Barrow, served as narrator while protagonists were played by Payton Burns, farmer/rancher; Madelyn Gerkin, government representative and Taylor Chapman, Oklahoma State University researcher.

Antagonists included Emily Garrett, concerned citizen; Addison Themer,

Federal Aviation Administration representative and Jace Karns, farmer/rancher.

The Agricultural Issues Team will be competing against other FFA chapters across the state throughout April in preparation for the state contest held in Stillwater April 24-25.

Rotarian Tom Garrett introduced Burns who in turn introduced her team members.

OSU NEWS RELEASE

Tips given for saving money



FORUM PRESENTATION: *Kingfisher Lions' Club*



From: Chase Farrar, Program Chair,
Kingfisher Lions' Club

Dear Mrs. Burns and Kingfisher FFA
Agricultural Issues Team;

Thank you for your Drone presentation you
did at Lions Club on April 9. It was a great
learning experience for the Lions club
members. We enjoyed the program.

Thanks again.
Chase Farrar

Sunday, April 19, 2015 Kingfisher (Okla.) Times & Free Press



THE KINGFISHER FFA Agricultural Issues Team presented their coffee shop discussion debating the pros and cons of drones to the Lions Club on Thursday. Their presentation is titled "Should Drones be Embraced in Kingfisher County or Should UAV's Take a Return Trip Home." They are in the middle of spring competition and will compete at the State FFA Interscholastics April 28-29. Pictured are, from left, **Peyton Burns**, Emily Garrett, Addison Themer, Taylor Chapman, Madelyn Gerken and Jace Karns. [TIMES-FREE PRESS Staff Photo]



FORUM PRESENTATION: *Kingfisher County Republican Women*

 **Kingfisher County Republican Women**
We Vote and Promote Values

Agenda
April 13, 2015
InterBank Community Room

Call to Order

Invocation: *Annette Parham*

Pledge of Allegiance

Americanism: *Betty Harris*

Welcome and Introduction of Guests
Door prize

Report of Officers:
Minutes of Previous Meeting: *Judy Pannell*

Treasurer's Report: *Sylvia Gilmour*

Unfinished Business:

New Business:
National Day of Prayer – May 7

Announcements/Events:
OFRW Day at Capitol
New OK GOP CHAIRMAN: ??
Scholarship recipient – May
Reception for Gary Reid – May 2 @ 1PM Chisholm Trail Museum

Program: *Debbie Parks* - Kingfisher FFA Drone Debate
Sharon McElwain

HAPPY BIRTHDAY to our members with **APRIL** birthdays

Other: "THANK YOU" to our Lunch Hostesses – Gladys Hopkins and Barbara Swart
Adjourn

Determined to Make a Difference
Invite - Inform - Involve

2015 Officers
President: *Annette Reynolds*
402-315-6660
anreynold@gmail.com
1st Vice President: *Debbie Parks*
2nd Vice President: *Susan Kennedy*
Secretary: *Judy Pannell*
Treasurer: *Sylvia Gilmour*
Facebook: Kingfisher County Republican Women



FORUM PRESENTATION: *NBC Advisory Board*



NBC
PEOPLE YOU CAN BANK ON

DENNIS THEMER
President / Co Chief Lending Officer
NHL & FFA

4/24/15

Kingfisher FFA Ag Issues Team

Re: Presentation - NBC Advisory Board.

Thank you for taking your time to present your program regarding drones to the Kingfisher Advisory Board. Your presentation was timely and thought provoking. Each of our board members enjoyed the presentation.

Your entire group did an excellent job and I look forward to seeing you perform in the future.

Cordially,
Dennis



FORUM PRESENTATION: *Kingfisher County Administrators Conference; Kingfisher Area Legislators*



Kingfisher Public Schools

Making a Difference

April 17, 2015

To Whom It May Concern:

The Kingfisher FFA Ag Issues Forum Team presented their presentation to myself and the other school administrators within Kingfisher County at our monthly legislative and administrators conference. The conference was held at the Kingfisher Administrative Building.

Also in attendance were Representative Mike Sanders, Senator Darcy Jech, and Senator A.J. Griffin, who represent Kingfisher at the State Capital.

Sincerely,

Jason Sternberger
Kingfisher Public Schools Superintendant



FORUM PRESENTATION: *Kingfisher FFA Parent's Club*



FORUM PRESENTATION: *State FFA Contest*



FIRST PLACE Kingfisher FFA state winning Agriculture Issue Forum, from left, Holly Barrow, Taylor Chapman, Madelyn Gerken, Emily Garrett, Jace Karns, Coach Lori Burns, Addison Themer and Coach Amber Allen.

