

# Agricultural Aviation



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## In Search of America's Next Ag Pilots

Veteran operators are proceeding with care when it comes to training the next generation of ag pilots

### Also Inside:

- Dos and Don'ts for Aspiring Ag Pilots
- Modern Agricultural Production's Tug-of-War
- NAAREF Fundraising Explained



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## ON THE COVER

Veteran operators are proceeding with care when it comes to training the next generation of ag pilots

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Protégé John Thomas (left) and his mentor R.E. Pettis



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# President's Message

Brian Rau

## Words Matter

**W**ords matter. This phrase has been used by many, including individuals who do not share our industry's goals. The idea implied is used by those who believe they have a message of truth and by those who are involved in political spin. I believe our industry has a message that is true and needs to be told. However, sometimes we do not present ourselves to the public in a manner that brings that message forward. This is not by design, but usually a result of the fact that most of us have had very little training in public/media relations. It is also a result of being involved in an industry that has a certain amount of risk, which makes it easy to come across as reckless or as a bit of a daredevil when discussing our livelihood with others. How we present ourselves and the words we use do matter.

In last year's July/August issue, Andrew Moore makes the point that conventional, high-yield agriculture is sustainable even though the word *sustainable* has been widely attributed to organic agriculture. The meaning of words gets changed because people do not bother to check what a word means or if the application of the word is correct. Sometimes it is because of laziness, and sometimes it's because they do not want the word to mean what it does.

This is also a problem with the wind energy business as it affects us. I am referring to the use of the words *wind farm*. If you look up the definition of farm, the definitions refer to agriculture; if you look up the definition of agriculture, the definitions refer to crop production or animal husbandry. Wind energy clearly is not agriculture, it is industrial. This may not seem important until you consider zoning.

Having worked with my local zoning board regarding wind turbines and how they affect our industry, I realized too late that I missed an opportunity to affect zoning. In my area, as in most, wind turbine construction is allowed with a *conditional use permit*, as opposed to changing the area from being zoned agricultural to being zoned industrial. If the point could have been made that the zoning classification needs to be changed, it would have at least made the public more aware of what was being proposed for the area. This was not considered

in part because of the wind energy's public relations move of using the words *wind farm*. (One type of farm is surely compatible with another type of farm.)

In an October 19, 2009, *Wall Street Journal* article on why Iowa is a good state for wind energy, a representative of Iberdrola Renewables (a Spanish company) is quoted as saying the land is "relatively rural, making land control easy." As residents of rural America, we should not let land control be easy by outside interests. The official government name for a group of wind turbines is usually something like *wind energy conversion facility*. This term never gets used by the media or the public. In our industry, I urge everyone not to use the words *wind farm*. That's the last time I will use them.

### Prepare for the Season in Word and Deed

The 2010 season has started for some and will be starting soon for the rest of us. What kind of opportunities will we have to tell our story to the public and the media? Undoubtedly, issues will arise. You may be the one asked to comment, or your non-industry friends and acquaintances may give you an opportunity to tell our story.

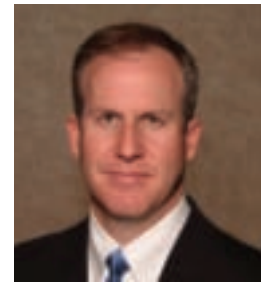
We all prepare our equipment and businesses before the season; we also need to be prepared for questions from the public and the media. NAAA has many resources available, such as the NAAA Member Media Kit, located at [www.agaviation.org](http://www.agaviation.org). This kit contains general information on talking to the media and specific information on subjects of interest. A review of NAAA's Aerial Application's Growing Role video will remind you of the positive aspects of the industry. Make a point of attending a PAASS presentation during a state/regional convention, as they often have discussions on issues that affect public relations.

Some other sources of information include *Ag Air Update's* "Spreading the Facts" section on its Web site, [www.agairupdate.com](http://www.agairupdate.com); "The Truth About Organic Foods" by Alex Avery; and "The Benefits of Pesticides, A Story Worth Telling" by Fred Whitford, Purdue University.

Be ready. Your words and actions can make a difference. ■

# Executive Director's Message

## Andrew Moore



## Modern Agricultural Production's Tug-of-War

It would certainly seem based on population forecasts that opinions would favor the continued and growing use of modern agricultural production. Modern agricultural production, as I define it, is the judicious use of biotech seeds, fertilizers and crop protection products to ensure ample yields of crops used to produce food, fiber and bio-fuel. Aerial application plays an important role in modern agricultural production because its use in delivering plant inputs is by far the fastest, does not disturb or damage a crop, and is more reliable than other forms of delivery. According to the U.S. Census Bureau, the world population is estimated to be 6,796,500,000. Current United Nations predictions estimate that the world population will reach 9.2 billion around 2050. Some predictions estimate that the population in 2050 might be as high as 11 billion.

Maximizing crop yields using modern agricultural production will help to feed, clothe and provide bio-fuel for our current and our many more projected inhabitants on planet earth. It will also safeguard land to use for non-agricultural uses such as preserving unique virgin ecosystems, bio-diverse forests and/or land to house the projected 2.4 billion more people expected to populate our planet. This balance will not be reached if modern agricultural practices are curbed.

The good news is that short-term forecasts are positive for modern agriculture. A global consultancy firm to the crop protection industry estimates that the worldwide forecast growth rate for the crop protection market through 2013 is 1.4 percent growth annually. In addition, there are a number of new crop protection products on the drawing board so agri-chemical companies are optimistic about the future. According to the same source, there are currently 13 herbicide active ingredients, 11 insecticide active ingredients and 17 fungicide active ingredients in research and development. The average rate of new crop protection products introduced annually into the market is 8.4. Again, these are positive signs for modern agriculture's future.

Unfortunately, other variables affecting the well-being of modern agricultural production aren't as favorable. Government regulations restricting modern agricultural practices are one such variable. Over the past year we have seen a barrage of actual and proposed government actions that result in unnecessary and burdensome restrictions on modern agricultural production in the U.S. These include the U.S. Circuit Court of Appeals, 6th Circuit's decision that applications of crop protection products require Clean Water Act permits. As EPA develops this policy there are real concerns that this will eliminate the ability to quickly make needed applications to ensure crop health—a necessity to ensure abundant crop yields.

Other policies that appear to jeopardize modern agricultural production, at least in the U.S., are proposed policies by Congress to regulate the emission of greenhouse gases (GHG). Legislation on this subject that has passed the U.S. House of Representatives would reduce the amount of allowable carbon emissions into the environment to 80 percent below 1990 levels by the year 2050. Some federal lawmakers are touting the benefits to agriculture of the GHG legislation that passed the House because of provisions that reward farmers for converting their cropland to forestry for carbon sequestration purposes. National farm groups have countered stating that these provisions would shift as much as 59 million acres of food production into forestry, which is equivalent to setting aside every acre of land used for crop and food production in California, Indiana, Kentucky, Mississippi, Nebraska, North Carolina, Pennsylvania and Tennessee. This would also result in a number of ag job losses at a time when our national unemployment rate is hovering around 10 percent—levels that haven't been seen since the Great Depression. It also makes it a considerably greater challenge to feed, clothe and provide energy to the growing number of people projected to live on our planet in the next 40 years.

Modern agricultural production is in the midst of a tug-of-war match. The economic projections, based on forecasted global demographics, are pulling modern agricultural production in a positive direction. However, a number of government policies are pulling the rope out of the hands of those involved in modern agricultural production making it much more difficult to compete. Although, as previously mentioned, a number of new herbicide, insecticide and fungicide active ingredients are being researched and developed, that number has dropped 200 percent compared to the number of new active ingredients that were introduced in the 1980s and 1990s. Regulatory costs are having a negative effect on developing these

new technologies. Even Bill Gates, founder of Microsoft and controlling trustee of the Bill & Melinda Gates Foundation—a foundation with a \$35.1 billion endowment and primary goal of enhancing healthcare and reducing extreme poverty globally—recently went on record stating, “environmentalists are standing in the way of feeding humanity through their opposition to biotechnology, farm chemicals and nitrogen fertilizer.”

I am optimistic that feeding, clothing and providing for the well-being of mankind will win out in this debate, but we must always stand ready to argue on behalf of our industry's merits because this is a real and extremely important debate. ■



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# WNAAA President's Message

Jane Barber



## Do You Have a Jar?

**I**n Exodus 16:33 it reads, "Take a jar, and put ... manna in it."

I have a "manna jar." It is where I keep those things that sustain me. Well, it is not a jar, it is an old, small treasure chest my father-in-law had given me. It is swollen full of things that are meaningless to you but riches to me! At times when things get overwhelming and I am having a "Can't Fix Stupid," Everything Goes Wrong Day, an I Know I Filed That Chemical Invoice in the Right File, but Where is It? Day, or a flat-out I Just Need a Change of Surroundings Day, I can go to my manna jar and pull out the Air Tractor pin Brett wore, the cute little Snoopy dog key chain Colleen had given Brett, or the poem card from Dwayne's funeral. Things that help you to just stop and remember fun times, good times ... memories.

Oh, I have things in there from my grandpa, my uncles, my long lost high school chums, my first prom flower. It even has a container of my Grandpa Ralph's cremation ashes. There's my first NAAA convention nametag, my first (and only) trip to Hawaii photo, all sorts of "grandma" trinkets, colored notes from the grandchildren, a stone from the shores of Iceland. These are all reminders of people and places God has put into my life, reminders that I am not alone and never will be!

My point is we all need a manna jar to withdraw to. It can be a photo album, a family history book; maybe your thing is writing and putting your thoughts on paper. Take some time when you need a breather and find your manna jar. Open it up and let go, while you enjoy the trip down memory lane, or getting those pent-up frustrating thoughts on paper. It really only takes a few moments to put your mind somewhere else and put your thoughts back into the right perspective.

While this seems like it is only advice for the office girl, it could be applied to you, Mr. Pilot! You could climb out of that airplane and walk away from the loading area, take some deep breaths, open your wallet and gaze at that photo of your wife or the worn one you have had in there of your children even though they are seven years older now!

When stress sets you spinning, reach for your manna jar, open that faded letter from your college roommate and smile as you are taken back and your frustrations are forgotten.

Take some time when you need a breather and find your manna jar. It really only takes a few moments to put your mind somewhere else and put your thoughts back in the right perspective.

Take this action step and find a box, an envelope, an old coffee can ... make your own manna jar and use it as needed! ■





## Washington Report

# It's Tax Time: IRS Procedures, Tax Forms and Publications for Aerial Application Businesses

It's that time of year again. Tax forms for 2009 are due April 15, 2010. One of NAAA's greatest services to the industry has been providing tax relief to aerial application businesses in the form of tax credits and refunds on aviation fuels used for farming purposes and for security improvements made at facilities storing ag chemicals. Be sure you know the rules and forms necessary to take advantage of these potential savings.

### Tax Credits and Refunds for Aviation Fuels

In July of 2005 NAAA successfully lobbied Congress to enact legislation providing more than \$4 million in annual federal fuel tax relief for U.S. aerial applicators. The new law ended the requirement for aerial applicators to obtain waivers from their farmer-customers in order to qualify for tax-relief. In addition, the law enables aerial applicators relief from federal excise taxes associated with fuels consumed while ferrying to apply to cropland to and from an agricultural application facility.

Federal excise taxes levied on fuels used on a farm for farming purposes, such as fuel used in the application of fertilizers, pesticides or other substances, including aerial applications, qualify for either a full

tax credit or refund. The updated IRS reference that explains the rules and procedures to follow in taking these fuel tax credits and refunds is *IRS Publication 510-Excise Taxes*, specifically Chapter 2 of the document (see [www.irs.gov/pub/irs-pdf/p510.pdf](http://www.irs.gov/pub/irs-pdf/p510.pdf)). *IRS Publication 225-Farmer's Tax Guide*, also provides instructions explaining the rules and procedures to follow in taking these credits and refunds, specifically *Chapter 14 on Excise Taxes* (see [www.irs.gov/pub/irs-pdf/p225.pdf](http://www.irs.gov/pub/irs-pdf/p225.pdf)).

The rules for taking tax credits or refunds are different depending on the fuel used. As stated in *IRS Publication 510 and 225*, for aviation gasoline, the aerial applicator may claim a tax credit as the ultimate purchaser of the fuel, but cannot claim a refund. Aviation gasoline users may take a tax credit using *IRS Form 4136, Credit for Federal Tax Paid on Fuels* (see [www.irs.gov/pub/irs-pdf/f4136.pdf](http://www.irs.gov/pub/irs-pdf/f4136.pdf)). The instructions for *IRS Form 4136* may be found at [www.irs.gov/pub/irs-pdf/i4136.pdf](http://www.irs.gov/pub/irs-pdf/i4136.pdf).

According to *IRS Publication 510*, "for kerosene used in aviation [Jet A], the ultimate purchaser may make the claim or waive their right to make the claim to the registered ultimate vendor [fuel supplier]." A registered



ultimate vendor may sell kerosene used in aviation free of excise taxes and make the claim with the IRS himself—if he chooses to do so; however, he is not obligated to do this. In order for the registered ultimate vendor to make this claim he must obtain a waiver from the ultimate purchaser. A sample waiver is included as *Model Waiver L* in the *Appendix of IRS Publication 510*. The registered ultimate vendor must have the waiver at the time the credit or payment is claimed. Only an ultimate vendor that is registered can make these claims. Registration requirements are partially explained on *pg. 5 of IRS Publication 510*. If the ultimate purchaser of kerosene does not waive his right to make the claim, he may make a claim for a refund on the excise tax on fuel himself using *IRS Form 8849* (see [www.irs.gov/pub/irs-pdf/f8849.pdf](http://www.irs.gov/pub/irs-pdf/f8849.pdf)).



The IRS recommends that tax filers making these claims keep the following records at their principal place of business:

- the total number of gallons bought and used during the period covered by the claim
- the dates of the purchases
- the names and addresses of suppliers and amounts bought from each during the period covered by your claim
- the nontaxable use for which you used the fuel
- the number of gallons used for each non-taxable use

As stated up front, NAAA was successful in providing aerial applicators full relief from the federal excise taxes levied on both aviation gasoline and kerosene used in aviation. This includes, according to *IRS Publication 510*, “fuel used by an aerial applicator for the direct flight between the airfield and one or more farms.” These taxes levied on fuels “ferrying to the field” did not qualify for tax relief until recently. These fuel tax relief provisions, which eliminated the farmer waiver provisions and include exemptions on fuel used while ferrying and making applications, are estimated to save the aerial application industry \$20 million a year.

NAAA continues to monitor congressional activity to ensure this tax relief is preserved. With the federal deficit and federal spending growing, Congress will continue to try to find

new ways to offset these deficits, which include amending the tax code to eliminate certain tax exemptions.

### Ag Chemical Security Tax Credit

NAAA, working with a number of other agricultural organizations including CLA and ARA, was successful in attaching a chemical security tax credit to the enacted 2008 Farm Bill. The credit helps to offset security costs paid or incurred by an eligible agricultural business that “manufactures, formulates, distributes, or aerially applies specified agricultural chemicals.” A specified agricultural chemical includes “any pesticide (as defined in section 2(u) of the Federal Insecticide, Fungicide, and Rodenticide Act), including all active and inert ingredients, that are customarily used on crops grown for food, feed, or fiber.” The credit is limited to \$100,000 per facility and a \$2 million annual limit and covers 30 percent of the amount paid or incurred for qualified security measures. The tax credit expires at the end of 2012.

To apply for the tax credit an aerial applicator should use *IRS Form 8931* (see [www.irs.gov/pub/irs-pdf/f8931.pdf](http://www.irs.gov/pub/irs-pdf/f8931.pdf)). As stated on *IRS Form 8931* “taxpayers (other than partnerships, S corporations, estates, and trusts) whose only source of this credit is from those pass-through entities are not required to complete or file this form. Instead, report this credit directly on line 1v of the 2008 Form 3800, General Business Credit.”

The Congressional Legislative Conference Committee describing the provision’s intent stated the following: “The Conference Committee believes that a security tax credit would help the agricultural industry to properly safeguard agricultural pesticides and fertilizers from the threat of terrorists, drug dealers and other criminals. This credit will help ease the substantial increase in production costs faced by agriculture related to installing improved security measures that will better protect the American public from the potential threat of terrorism or other illegal activities.”

Under Section 450 of the enacted legislation, stated “Qualified Chemical Security Expenditures” are amounts paid for: (1) employee security training and background checks; (2) limitation and prevention of access to controls of specified agricultural chemicals stored at a facility; (3) tagging, locking tank valves, and chemical additives to prevent the theft of specified agricultural chemicals or to render such chemicals unfit for illegal use; (4) Protection of the perimeter of specified agricultural chemicals; (5) Installation of security lighting, cameras, recording equipment and intrusion detection sensors; (6) implementation of measures to increase computer or computer network security; (7) conducting security vulnerability assessments; (8) Implementing a site security plan; and (9) other measures provided for by regulation. ■



# In Search of America's

*By Jay Calleja  
Manager of Communications*

It sounds simple enough on the surface. The aerial application industry needs new pilots, and new pilots want to get into ag aviation. The reality is newcomers must overcome several obstacles before they can earn a seat, none bigger than earning the trust of a willing mentor. But who is willing to mentor? And who is worthy of being mentored? Those questions are on the minds of operators, prospective ag pilots and NAAA.





# Next Ag Pilots

Like several people who were attending their first NAAA Convention last December, Jeff Johnson, an amiable young man from Eufala, Ohio, came to Reno, Nev., to learn more about the aerial application industry and look for an opportunity to become an ag pilot. The Flying Tiger Aviation graduate listened intently during NAAA's General Session program on mentoring new ag pilots and was one of 75 to 100 attendees who crammed into one of NAAA's *Compaass* Rose sessions, soaking up

advice from some of the industry's wise old owls. But just in case his intentions weren't clear, Johnson came up with the ingenious idea of wearing a different colored T-shirt each day of the show emblazoned with the same simple message: NEW AG. PILOT LOOKING FOR FIRST SEAT.

He was not alone. Several pilots, many of them students of one ag flight school or another, came to Reno hoping to hit it off with an operator willing to



*Jeff Johnson was one of several pilots looking for a seat at NAAA's 2009 Convention in Reno, Nev.*



*"I know a bunch of guys in this room who are in the exact same boat as me where they're trying to do all of the right things for you. Still no mentors," said Nathan Broehl, a pilot looking for work, at NAAA's 2009 General Session on mentoring.*

give them a shot. During the General Session program on mentoring, the NAAA Insurance Committee did a terrific job of shedding light on the process and the parties involved when an operator wants to train and mentor a new ag pilot. The program clearly illustrated the coordinated effort that must take place between the operator of an aerial application business, the operator's insurance agent and the underwriter to get a new or low-time ag pilot insured and on the path to becoming a full-fledged ag pilot.

Obtaining insurance for a new pilot is one of the barriers operators and new pilots face, but one thing that came through loud and clear is that the operator is the linchpin to the pilot-operator-agent-underwriter union. Insurance agents and underwriters are willing to work with operators they respect and trust to come up with a workable solution.

NAAA's General Session program showed how the process could work, but there's a bigger issue with which

operators, the industry as a whole, NAAA and people who want an opportunity to learn and work as an ag pilot are grappling. More importantly than *how*, operators and prospective pilots looking to get into this industry are struggling with the issue of *who*—whom to mentor, and who *will* mentor.

Consider Nathan Broehl's situation. Broehl is an NAAA member pilot and another Flying Tiger Aviation student who went to NAAA's 2009 Convention. In addition, he is a certified flight instructor and a pipeline patrol pilot with an accident-free safety record.

"I'm still having trouble finding an operator," he announced at NAAA's General Session. "I've made a lot of phone calls, and they've all been very kind, but they say, 'Well, the insurance is too much.' ... I know a bunch of guys in this room who are in the exact same boat as me where they're trying to do all of the right things for you. Still no mentors."

According to a demographics survey of aerial pesticide applicators conducted by the EPA in 2006, aerial applicators have 25.42 years of experience, on average. Unquestionably, the industry needs new blood to replace ag pilots nearing retirement, keep up with the demands of an ever-growing world population and fulfill aerial application's mission to enhance food, fiber and bio-fuel production safely, efficiently and effectively. Aerial application operators understand this intuitively, but it's not that simple.

"A lot of young people don't realize how much the operator is risking taking on a new pilot," said Jeff Reabe of Reabe Spraying Service in Plainfield, Wis. "Even when I hire an experienced pilot, I have to be real careful about who I hire because my reputation is riding on what he does. He could

"Even when I hire an experienced pilot, I have to be real careful about who I hire because my reputation is riding on what he does. He could make one mistake, and I could lose a major account for years. So, it's not just the dollars and cents that we're risking. We're risking our future."

—Jeff Reabe, Reabe Spraying Service, Plainfield, Wis.



make one mistake, and I could lose a major account for years. So, it's not just the dollars and cents that we're risking. We're risking our future."

Richard Long of Havana, Fla., understands that. He went to Reno to meet operators too. In addition to 24 years of flying experience, he has been in law enforcement for 16 years, so he reads body language. "I saw that the operators wanted to put in their two cents about what they feel is going on and what they see. And a lot of it was they wanted to reach out to the new guys, be they 25 years old or 50 years old, but there's a bridge there, there's a gap between us and them," Long said.

Part of the problem, he acknowledged, is that operators have doubts about whether pilots looking to get into aerial application are interested in it for the right reasons. They are on guard against the get-rich-quick mentality, for one thing.

"We've got a lot of new guys showing up in our industry wanting to get involved in it for the money," said Terry Sharp of Agri-Tech Aviation in Indianola, Iowa. "I get 20 or 30 or 50 phone calls, e-mails a year—guys wanting to get in it. Eighty percent of the time the first question they ask is, 'How much money can I make?'"

"I believe that a lot of people that are chasing the golden ring for the income, they want the money, but they're not willing to do the work to get it," Long said.

Another point new ag pilots need to understand is there's more to it than flying. "I haven't heard anyone ask for a job as a professional pesticide applicator," another operator at NAAA's mentoring program observed. "Everybody wants to get into this business to fly airplanes, and that's secondary to the job, in my opinion."

### Establishing Trust

For all of its technological advances, agricultural aviation remains a

## Some **Do**s and **Don't**s for Aspiring Ag Pilots on the Job Trail

While there are no guarantees, your chances of finding an operator to mentor you as an ag pilot will improve if you follow this advice.

### **DO: Join NAAA and the state or regional ag aviation association in your area.**

Membership has its privileges. It shows that you are serious, for one, and grants you access to valuable resources like NAAA's Annual Membership Directory in print and online. Whether you are a pilot looking for a seat or an operator looking for a pilot, NAAA's directory offers a wealth of nationwide contacts and resources.

**DON'T: Come across as opportunistic.** Asking right off the bat how much money you can make as an ag pilot leaves a bad taste in the mouths of operators.

### **DO: Come across as humble and hungry at the same time.**

As operator Stan Jones put it, "I had one call [last] summer. The man's attitude was fantastic. 'I don't know anything. I'll come work for you; I'll do whatever it takes.' I hired him."

**DON'T: Underestimate the importance of on-the-job training.** If someone gives you the chance to get your foot in the door, think twice before turning it down, even if you consider it an inferior position. For instance, an operator may ask you to pay your dues for a year or two as member of the ground crew to learn the ag side of the business. The pay won't be great, but the experience will be invaluable.

**DO: Register as a pilot looking for work on NAAA's Web site.** Complete the form on pg. 16 or visit [www.agaviation.org/careers.htm](http://www.agaviation.org/careers.htm) for more information.

**DON'T: Miss the Compaass Rose events** at conventions across the country. NAAA created Compaass Rose to advise new pilots and people interested in getting into the industry.

**DO: Attend NAAA's Annual Convention** and conventions held by state and regional ag aviation associations. These are golden networking and learning opportunities.

**DON'T: Get discouraged.** You knew you weren't going to land a seat overnight, but chances are it's going to take longer than you think to catch your big break. Author Seth Godin refers to that period when you've experienced your seventh or eighth rejection as The Dip, that "long slog between starting and mastery." In his book "The Dip: A Little Book That Teaches You When to Quit (And When to Stick)," Godin advises, "Never quit something with great long-term potential just because you can't deal with the stress of the moment." ■

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*Richard Long understands the risks an operator takes when hiring a new ag pilot, but worries about making the barrier to entry so onerous that operators reach a point where there won't be enough quality pilots available to meet the industry's future needs.*

throwback industry. It is an industry where you rely on feel and instincts as much as you do your instruments. It is an industry based upon trust. Trust between the operator and his customers, and the operator and his pilots. The best way to learn it—the only way, really—is at the knee of an experienced operator. This goes beyond a mentorship and falls into the category of an apprenticeship. It's a lot to ask for of an operator to share his knowledge and experience, and a lot to expect from a trainee that is going to have to toil at the bottom, learning the job from the ground up, but that's the way it is more often than not.

Each situation and opportunity is unique, and from the operator's perspective, the decision to mentor and train a new ag pilot is not only a personnel decision but a highly personal decision. There is one more obstacle new or low-time ag pilots encounter, whether it's stated or not—the fear of getting burned.

"They've worked hard to get their business to where it's at, and they're just having a hard time taking that step to say, 'Okay, I'm going to hook the hose up to you, and it's just going to be a 9-inch fire hose, and we're going to go and see how far you can go,'" Long said.

"I understand the operators [who] are saying, 'What are we going to get out of this? We don't want to just have a revolving door. ... There has to be a trust on both sides. Is there a goal that I can look for, and is there a commitment from the operator at the same time?'"

Long is willing and eager to pay his dues, but at 49, he knows he is one of the older pilots looking to get into the industry. He flew as a corporate pilot for the state of Florida for five years before joining the Crestview (Fla.) Police Department as a Major of Tactical Operations. Last May, he quit his job with the Crestview P.D. to pursue his dream of becoming an ag pilot. The next day, he started flight school at Ag Flight Inc. in Bainbridge, Ga., located just 45 miles from his house.

After putting in countless calls, he landed a short-term loading gig last summer at Dungan Aerial Service in Connersville, Ind., working for Jeff Dungan and Travis Weston. "It was something I had never been used to," Long said. "You just had to start learning it on an hour-by-hour basis." Even though the job only lasted three and a half weeks because corn prices were fluctuating and farmers weren't requesting as much spraying, he was grateful for the opportunity. "It was absolutely vital to learn that side of the business."

## Are You Willing to Mentor?

NAAA receives frequent inquiries from people outside the industry who are interested in becoming ag pilots and operators. There is currently no definitive list of industry professionals who can be counted on to guide and

educate these individuals. NAAA appeals to you to support your industry by becoming a resource for these hopefuls. Please contact us to let us know that you are willing to invest a little of your time when folks are looking for direction and guidance. NAAA will not publish your contact information as a dedicated mentor, but will direct inquiries to you when

someone in your geographic area contacts us. A few moments dialogue with an aspiring pilot could make all the difference for their future and ours. Please commit today to advocate for the future of our industry by becoming a mentor. Contact Jay Calleja at the NAAA office at 202-546-5722 or by e-mail at [jcalleja@agaviation.org](mailto:jcalleja@agaviation.org). ■

Long first looked into agricultural aviation in 1984 when he was 24 years old. He was working for the Florida Highway Patrol and visited an operator in north central Florida about getting into ag aviation. Although sympathetic to his plight, the operator did not have much to offer in the way of encouragement. “He literally had hundreds of résumés” and told Long it is very difficult to get into the business as an outsider. “That’s when I just kind of accepted that I just wasn’t raised in the right family, even though I had lived on a farm,” Long said, chuckling.

He exchanged business cards with several operators at NAAA’s convention, but he doesn’t have anything lined up for the 2010 season. In fact, he’s back in law enforcement working as a Havana, Fla., police officer. He hasn’t given up on his dream of becoming an ag pilot, however, something he was up front about when he was hired.

“My eyes roll back in my head. That’s the love of aviation that I have. Not corporate, not flying freight like I used to. The ag side of the business is where it’s at. That’s what I want to do,” Long said. “I will never let that go. Never. And I’ll keep on going every year. I’ll keep going back to NAAA, the conventions—however long it takes for me to meet somebody and that marriage happens.”

### Two Groups of Pilots Searching for One Common Runway

Where there’s a will there’s a way, but the challenge is getting to that willing place where an operator is willing to give an existing pilot or a newcomer an opportunity and the new pilot is willing to demonstrate his commitment to the operator and to the industry.

“I had one call [last] summer,” said Stan Jones of Top Hat Aerial

## INQUIRING MINDS WANT TO KNOW... What do Insurers Value Most When They Evaluate a New Pilot an Operator is Mentoring?

An operator from Northern Minnesota who has mentored several pilots asked a question on a lot of people’s minds at NAAA’s General Session program on mentoring.

“My question is to the underwriter,” he said. “When we mentor new pilots, what do you guys look for—what’s more important to you? That they’ve been to an ag pilot training school? Is it the farm background? Is it the time loading? What things do you guys look at?”

Not surprisingly, the answer is a lot of things, Steve Knowle, an underwriter with Phoenix Aviation Managers Inc., said, but the operator’s reputation and relationship with the insurer top the list. “The most important thing is the relationship that the operator has with the insurance company and how long he’s been insured and been a loyal customer of a particular company. I would say that’s the most important, because once I develop a level of trust

in my customer, I’ll allow him to do just about anything he wants” with respect to training and insuring a new ag pilot.

That’s not the only consideration, however. “Now, we do put a high value on the ag schools, and we do like to see that,” Knowle said. “If I had an operator that I have only insured for a year or two and was not that comfortable with him, yet he came to me with a transitioning pilot, if I were to do it at all, I would for sure say that he would have to attend one of the schools.

“The other thing I consider in the big picture is maturity level. Is the gentleman married? Does he have a family? Has he moved around a lot? There’s just a lot of variables and things that I consider, but again, I think the most important one is the length of time that the operator has been insured with us.” —J.C. ■



Doug Davidson (left) and Steve Knowle role play an exchange between an insurance agent and an underwriter. In the skit, Davidson approached Knowle about insuring a new ag pilot who would work under the supervision of a mutual operator client of theirs.





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## Are You a Pilot Looking for Work? An Operator Looking for a Pilot?

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Email to: [information@agaviation.org](mailto:information@agaviation.org)

**NOTE:** Applications submitted in 2009 have been deleted.

Please resubmit your application for 2010. You **MUST** be a member to be listed on NAAA's Web site, but non-member listings will be kept on file at the NAAA office for distribution upon request to NAAA member operators.

**Are you a (circle one):**    Pilot looking for work?    Operator looking for a pilot?

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

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Email: \_\_\_\_\_

Dates Available: \_\_\_\_\_

Experience/Hours: \_\_\_\_\_

Total Time: \_\_\_\_\_

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State(s) Licensed in: \_\_\_\_\_

PAASS Qualified:    Yes    No

GPS:    Yes    No    Type: \_\_\_\_\_

Additional Experience or Information: \_\_\_\_\_

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**“If it wasn’t for the NAAA, we would be as far as the east is from the west. How would you marry up? Yeah, you may be able to be lucky. But there has to be a third party that is willing to pull these two together, because both of us are in the clouds. We’re socked in. We have zero visibility. And we need to marry up and find that one runway that we both can land on and feel safe when we do it.”**

**—Richard Long, NAAA Member Pilot, Havana, Fla.**

Applicators in Benkelman, Neb. “The man’s attitude was fantastic. ‘I don’t know anything. I’ll come work for you; I’ll do whatever it takes.’ I hired him. He came. I think it’s going to work.”

One of the best ways to demonstrate sincerity and network with operators is by attending aerial application conventions hosted by NAAA and state and regional associations around the country. In addition to the *Compaass* Rose program, there are plenty of opportunities to interact with industry veterans in an informal setting.

So how did that walking billboard of a T-shirt work out for Jeff Johnson in Reno? “Great,” he said. “It allowed me to meet a lot of people I wouldn’t have normally met.”

Since NAAA’s convention, Johnson has stayed busy attending state conventions, making phone calls and tracking down leads. He’s made several meaningful contacts, though not all of them have positions open. “Everyone I have talked to has been helpful in one way or another by giving me advice, new leads or both,” he said. “I had a couple of good flying opportunities shot down because I currently am not insurable for herbicide. Fortunately, there are areas doing a lot of fungicide and insecticide work so that is where I have been focusing. My next step is to hit the road and meet some of the operators I have been calling and visit some of those I met at the conventions.”

With persistence and patience, those efforts should pay off. John Thomas,

who completed his first season as an ag pilot in 2009, attended three Nebraska Aviation Trade Association’s conventions before he finally got the chance—and the insurance—he needed to fly ag. (For more on Thomas’s first-year experience, see pg. 18).

Beyond *Compaass* Rose and the overall convention experience, NAAA is exploring new ways to pave the road between prospective pilots and operators and serve as a conduit between members.

“If it wasn’t for the NAAA, we [new folks and experienced operators] would be as far as the east is from the west. How would you marry up? Yeah, you may be able to be lucky. But there has to be a third party that is willing to pull these two together, because both of us are in the clouds,” Long said. “I mean,

we’re socked in. We have zero visibility. And we need to marry up and find that one runway that we both can land on and feel safe when we do it. I believe that we can do that. I know we can do that. But at the same time, there has to be willingness to take that one step forward and to take the risk of stepping out” and investing in someone’s future.

The future of their businesses and the industry depends on grooming new pilots, which begs a final question: *Can operators afford not to mentor?*

Considering the number of ag pilots nearing retirement, anyone looking to get into the industry should take comfort in the fact that there are and will continue to be opportunities for rookie ag pilots to fill the seats of veteran pilots. ■

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Team Shenandoah Flight Service 2009

## Good Mentorship + New Pilot = SUCCESS

By John Thomas, Nebraska City, Neb.

**T**he dynamics between the new ag pilot and his or her mentors can be the difference between success and failure for the new pilot and the operator.

Being a first-year “new ag pilot,” I was determined to do everything I could to set myself up for success. Coming from military aviation I was used to getting a flight training syllabus, textbooks, simulator training and close supervision on every new aircraft I got checked out in. I did not expect to receive this pampering in ag aviation. I wanted to be as prepared as possible so that I could, as quickly and as reasonably as possible, become a good, safe and efficient ag pilot. This is, after all, the true bottom line regarding the risk/payoff of bringing on new pilots: how fast can the new guy come up to speed in order to become a safe and productive pilot for the operator?

### Preseason Preparation

Things within my control included becoming very familiar with all of the airplane’s checklists, limitations, emergency procedures, GPS and other related systems. Before the season started I obtained the pilot operating handbook and GPS manual from the aircraft I would fly and studied them. I read these manuals and then typed and printed out consolidated kneeboard cards for all the checklists, emergency procedures and aircraft limitations. R.E. Pettis, the owner/operator of Shenandoah Flight Service (Atlantic, Iowa), was taking a big chance on me by entrusting me with his livelihood, and the least I could do was to be as prepared as possible for any eventuality.

When I felt ready, Mr. Pettis handed me the keys to an Ag Husky with a fresh annual and new engine. Mr. Pettis encouraged me to fly as much as

I wanted in order to get comfortable and be ready for the season. With some guidance from Mr. Pettis and his son Monty, I developed a syllabus for the first couple of flights, first concentrating on getting to know the aircraft’s handling and stall characteristics and then focusing on the GPS, Crop Hawk and the bitter-sweet dump handle.

On my first flight, I climbed to 3,000 feet AGL (above ground level) and practiced steep turns with flaps up and down, slow speed flight, coordinated Dutch Rolls and then power on, power off and approach turn stalls, always recovering at the very first *indication* of an impending stall (i.e., mushy controls, plane not responding to inputs, slow speed, hair on back of neck standing up, etc.). These maneuvers were consistent with what I had been taught at Flying Tigers and in the military so I was comfortable performing all of them.



For my second flight I took off with 50 gallons of water and accomplished all of the aforementioned maneuvers. I was surprised that 50 gallons, about 400 pounds, would be so noticeable but the plane still handled well throughout. When I returned to the airport I overflowed the runway at 100 feet, and dumped the water ... wow! I was surprised by the amount of nose pitch-up encountered with *only* 50 gallons! Dumping water was/is good experience!

On my third flight, I carried 100 gallons of water and was given coordinates for a farmer's field that I could practice spraying. Before I descended into the field I overflowed it, making several dry runs using the GPS at a couple of hundred feet. Once I felt comfortable with its setup, switchology and displays I descended to a practice altitude of 50 feet, sprayed out the water and returned to the airport for practice landings.

Mr. Pettis continued to encourage me to keep flying despite my concern about spending his fuel dollars on non-revenue producing training flights. His patience and encouragement in this regard set the tone for the season and made me feel more relaxed and, I believe, actually helped me get up to speed faster.

### In Good Company

What I couldn't control were the attitudes of the ag operator and the team of seasoned mentors I would find myself in the company of. I hit the jackpot!

A couple of days before the season began, it started raining ag planes. Donnie Anderson, Sonny Blackburn and Ronnie Taylor, a former NAAREF president, arrived from Louisiana. Rich Lienard and Mike Smith flew in from Mississippi, and later in the season



*John Thomas (left) and R.E. Pettis, his mentor and the operator of Shenandoah Flight Service.*

“Cornbread” Goff and Paul Hokett arrived from Texas. All of these guys were seasoned veterans; some had been flying ag for more than 30 years. They were a wealth of knowledge that I would draw on throughout the season. Most importantly, Mr. Pettis, Monty and these magnificent seven were eager to help Ed Smith, another new pilot, and me by sharing their knowledge and experience, never in a demeaning way, but always with an encouraging, supportive “been there, done that myself” attitude. I would venture to say I learned just as much or more from these guys on the ground as I learned in the air, and I am fairly confident their insights most likely prevented me from having an accident if not an incident.

I have found ag aviation to be unlike any other type of flying. Books can't teach you how to be an ag pilot. Much of the knowledge, techniques and procedures used in ag aviation were written through the trials and tribulations of others and passed on through “hangar flying,” which I found to be invaluable as a new guy.

I always looked forward to these talks at the end of each day's flying. My mentors would always ask me how things went. I would share with them what went well and what didn't, and they would always tell of similar situations they had had in years past and how they handled it. They also made it very comfortable for me to ask questions throughout the day if I needed to. It was a very supportive environment.

I had a great season, thanks to the interaction I was able to have with all of my mentors. Every new pilot should be so lucky. I still have a long way to go to become a good, safe and efficient ag pilot, but with continued mentoring I am confident I will eventually get there. ■

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*Editor's Note: This is John Thomas's second article for Agricultural Aviation and he is beginning his sophomore season as a professional ag pilot. He completed his first season in 2009. John will continue to chronicle his experiences as an up-and-coming aerial applicator in future issues.*



*From left to right, Thomas dines with fellow Team Shenandoah pilots Ed Smith (another new ag pilot), Donnie Anderson and Ronnie Taylor.*

# NAAREF Fundraising: An Explanation

By Rod Thomas, Chairman,  
NAAREF Capital Campaign Committee

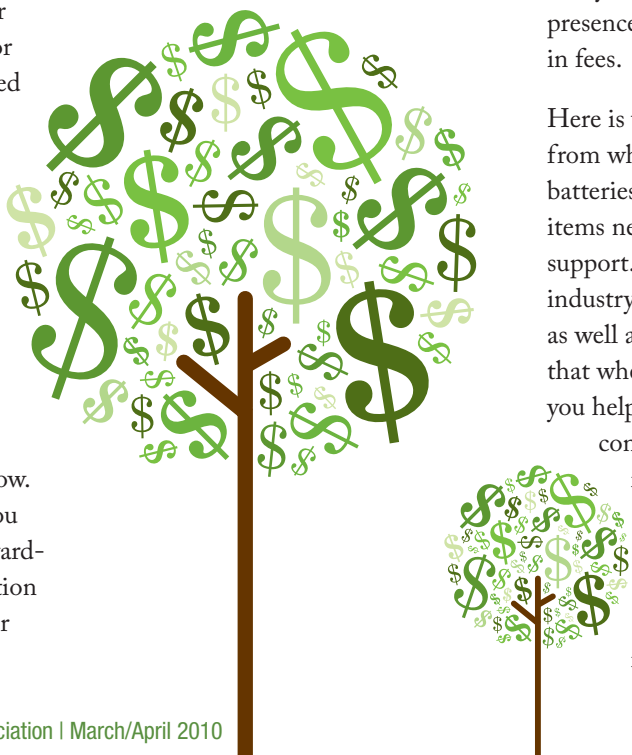
Of all of the positions I have held during my years with NAAA, chairing NAAREF's<sup>1</sup> Capital Campaign Committee ranks as one of the more challenging. When I was asked to take the job over five years ago I accepted with some stipulations. By the way, the committee's purpose is to generate the needed funding to organize the PAASS program, *Compaass* Rose and a number of other invaluable industry research and education programs. I agreed to serve on this committee only if I could trade financial support for value. Let me explain that thought in detail.

I don't have the skills it takes to beg for money; if I did I wouldn't be working for a living, I would be on a street corner in a warm city with a shopping cart and a tin cup. If I don't have the skills to beg for money for myself, how could I possibly beg for money for someone else? I theorized that as worthy as NAAA's and NAAREF's causes were, larger donations would only materialize if we could give something of value back for those very contributions. Individual donations for the good work NAAREF is doing were coming in long before I got on this committee and folks continue to support us now. We thank you for that and hope you continue to see the value in our award-winning PAASS programs, Operation S.A.F.E., *Compaass* Rose and other NAAREF programs.

Back to the value thing. Our committee, along with NAAA staff, came up with a matrix of benefits that industry donations from corporate donors can garner. If you are a vendor to our application industry, we have "ad space" available that you can purchase with your financial support. We view this as a win-win, since the health of our industry is important for our allied suppliers to continue to sell their goods and services to us. We have the perfect program for you to buy "ad space" in the form of NAAREF's PAASS program, which is delivered in every region of the country annually with more than 1,800 ag pilots and operators in attendance. We have several longtime contributors whose ads have appeared many times, but we could use more.

Currently, we are charging our PAASS viewing members \$80 plus a fee the state or region must pay. Per attendee, the total cost to produce and present this program is closer to \$150. You can see that the large corporate donations and individual, personal contributions make up nearly half of the total expense of this program. Of the attendees queried, most agree the price they pay is not only reasonable, they would pay more. Particularly, when considering insurance companies offer discounts for PAASS attendance and states offer continuing education credits needed to renew commercial pesticide applicator licenses. The NAAREF board has been hesitant to raise fees any higher because they believe it is more important to keep the attendance level high. There always seems to be those pilots whose presence would be lost with an increase in fees.

Here is where you can help. The folks from whom you buy aircraft, tires, batteries, fuel or any other ancillary items need to consider lending us some support. We are a vital and sustainable industry that adds to the GDP daily as well as to their bottom line. We ask that when you talk to these people you help us get them on board as contributors. We will give them more than the value of their support back in the form of national recognition and great marketing exposure. Most are spending money now buying ad space in various





I want to be a part of the team that is creating and supporting PAASS for the industry's future. This partnership includes operators and pilots, aircraft manufacturers, state associations, researchers, chemical companies, insurance providers, aerial application equipment manufacturers, service providers, and state and federal agencies. Together, we can ensure a role for aerial application in the production of America's food and fiber.

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industry places and this would just be an extension of that practice of getting their message to a target audience.

This plea is coming now, not because we are in any financial straights, but because we want to prevent that situation. Our association is benefiting from recent years of sound management and conservative leadership as well as a lean and effective office staff. We also have been very fortunate over the last several years to have received major contributions from the FAA and an EPA educational grant administered by the National Association of State Departments of Agriculture (NASDA) Foundation.

While those donations have come as a result of those agencies seeing the value in our PAASS program, national politics guarantee us only that these contributions are not guaranteed into the future.

Furthermore, as the costs associated with producing and presenting quality education programs continue to rise, the last thing we want to do is sacrifice quality. Not only has NAAREF committed to future enhanced production costs for several years with PAASS, during last fall's board meeting in Savannah, Ga., the board agreed to fund a new video dealing with chemical spill response. That video, once completed, will be available to "first responders" in all parts of the country. Our hope is that this valuable safety tool will save lives in our industry in the event of an aircraft accident by dispelling the myths

about the equipment and pesticides we normally use.

I can tell you from many involved years that staff and board members are working tirelessly to maintain our way of life. These efforts are not free or even cheap. Please continue your support of all our efforts by maintaining a membership in NAAA and considering a donation to NAAREF when you join or renew. Contributions to NAAREF **are** tax deductible. Your thanks will come in the form of knowing you helped preserve the future of an industry that is a wonderful way of life. ■

*Rod Thomas is owner of Thomas Helicopters in Gooding, Idaho. He serves as NAAREF's Capital Campaign Chairman, NAAA's Long Range Planning Committee Chairman and was NAAA's 2007 President.*

1 National Agricultural Aviation Research & Education Foundation





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# The Delicate Dance over America's Heartland: Future of Agricultural Aviation

By Michael Schertz

*The winner of the Women of the National Agricultural Aviation Association's 27th Annual Essay Contest and a \$2,000 scholarship is Michael Schertz. Here is his winning essay. For rules and information about the 2010 essay contest, please see pg. 28 or visit the WNAAA Web site at [www.agaviation.org/scholarship.htm](http://www.agaviation.org/scholarship.htm).*

When looking at the complete timeline of agriculture around the world, aviation shares only a minute fraction of that space. As long as people inhabited the earth, they raised livestock and grew plants for food. By comparison, aviation only got its start

in 1903 at Kitty Hawk, North Carolina. Even then, it wasn't until 1921 when the Ohio Department of Agriculture and an Army pilot first experimented with using airplanes to treat pests. In this mere 88 years, aviation and agriculture witnessed drastic changes in technology and innovation which have fused them together into the combined industry it is today. The future of agricultural aviation will largely depend on how it meets the challenges presented by this current age.

The most important challenge to agriculture in the coming decades is keeping the world supplied with

ever-increasing quantities of food. This will be even more critical in the future as the population continues to expand. According to the United Nations Department of Economic and Social Affairs, the world population is expected to grow to 8.92 billion by 2050. By comparison, in 2000 there were 6.1 billion people. Naturally, this 50% increase will require a proportionate increase in the amount of food produced. Adding to the pressure on world food markets is the fact that many developing regions such as China and India are increasingly going to a higher protein diet, requiring more grain to feed livestock. Another effect

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of more people inhabiting the planet is that some farmland will undoubtedly have to be used for residential and commercial purposes. Therefore, agriculture has the challenge of growing more grain on less ground. This can only be achieved by using high input farming techniques to increase yields on farms across the world. While much of North America already uses high input farming, aerial application provides the final step in maximizing production. A few days difference in treatment time can have significant effects on final yields. Across the rest of the world, major advances in agriculture must be made to feed the growing population. Increased fertilizer and pesticides must be utilized in order to increase productivity. Aerial application has the unique position to command the market share in these areas with its ability to apply treatments with speed and accuracy.

A major challenge for aerial aviation in the future is having enough qualified pilots to man the aircraft. Currently ag-pilots are aging at a faster rate than new pilots are entering the field. Sooner or later this imbalance will become a major problem when the current pilots land for the last time. In addition to the actual numbers of these pilots currently spraying, this group has accumulated immeasurable quantities of knowledge unique to the job. Many have been in this business for over twenty years and thus have learned many of the “tricks of the trade”. Any new pilot entering this sector of aviation will need years of experience to begin to fully replace an older, more experienced pilot. Another factor effecting agricultural aviation is the dismal state of aviation in general. Compared to the 1970s or 1980s, aviation has become much more expensive. Therefore becoming a pilot of any sorts is out of reach of many

who'd otherwise be interested. With fewer pilots in all areas of aviation, less become intrigued with the unique aspects of agricultural aviation and make careers in it. Just as threatening are recent government and media attacks on corporate aviation. It's portrayal of corporate aviation as elitist and unnecessary further undermined aviation's perceived attraction to the ordinary citizen. Agricultural aviation must broaden its “recruiting base” so to speak to reverse this coming crisis. It must do more to attract qualified pilots rather than solely relying on family connections. The industry must also do more to promote general aviation to ensure a steady supply of people who are interested in aviation.

To ensure a bright future, agricultural aviation must also work hard to change public perception of the industry to a positive one. To many in the public, the

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first image of aerial application is the crazy duster in *Independence Day* or Alfred Hitchcock's *North by Northwest*. Sadly, there is an assumption that all pilots go out and spray the first field they see without worrying about where drift goes. Promoting and demonstrating programs such as PAASS and others would do much to show this is an industry concerned about the well-being of the community. Letting the public get a close-up view of some modern operations would let them see just how far aerial application has come from its primitive dusting roots. Combining this with setting high self-imposed standards would go a long way towards improving its public image. All of this becomes even more crucial in the age of the green movement. To someone unfamiliar with agriculture, seeing a plane going across a field spraying and burning fuel would be

as far away from *green* as possible. In fact, aerial application and high input farming produce the food required that would otherwise come from slash and burn farming somewhere else in the world. The industry must promote the perception that it is providing a positive service which is, in fact, creating a more environmentally friendly world.

To have a spot under the sun in the future, agricultural aviation must confront and triumph over its present challenges. This industry must deal with issues including attracting qualified people, public perception issues and governmental apathy. In spite of these, today agricultural aviation is more important than ever as a resolution to global food deficiencies. Its unique ability to quickly and efficiently protect and increase food stocks ensures that

agricultural aviation's future is bright. Generations to come will share our excitement of watching these planes perform their delicate dance over America's heartland. ■

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# Michael Schertz



*Michael Schertz is a third-generation pilot. He obtained his pilots license on his 19th birthday and has logged 130 hours. At 20 years old, Michael has spent over half of his life working in the family business. He began loading and fueling aircraft in 1998 when he was 10 years old. He is a third-generation employee of the business started by his grandfather and currently run by his father. When he's not up in the air giving rides to his friends, Michael is studying Mechanical Engineering at the University of Illinois-Champaign where he is a junior. He enjoys hunting, fishing, camping, shooting, riding dirt bikes and this is his third year as a Young Life leader at a Champaign high school.*

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# Political Influence on Agricultural Aviation Chosen as Theme of WNAAA's 2010 Scholarship Essay Contest

WNAAA will award a \$2,000 scholarship again this year as the top prize in its 28th annual essay competition. Covington Aircraft Engines has generously agreed to sponsor a \$1,000 scholarship. If you are an NAAA member (or become one by June 15, 2010), WNAAA invites you to sponsor an applicant for the 2010 WNAAA Scholarship. The scholarship is not restricted to use for a flying career. Any educational pursuit beyond high school (at any age) is eligible.

## 2010 Essay Contest Rules

**The theme of the 2010 essay competition is "Political Influence on Agricultural Aviation."**

The competition is open to all NAAA members and the children, grandchildren, sons-in-law, daughters-in-law or spouse of any NAAA operator, pilot member, retired operator or pilot who maintains an active membership with the NAAA. The contest is also open to allied industry

members and their relatives. To qualify, dues must be paid by the organization or individual member on or before June 15, 2010.

Entrants must have graduated from high school prior to the entry deadline and be enrolled in continuing education during the year of entry. Previous winners are not eligible to compete.

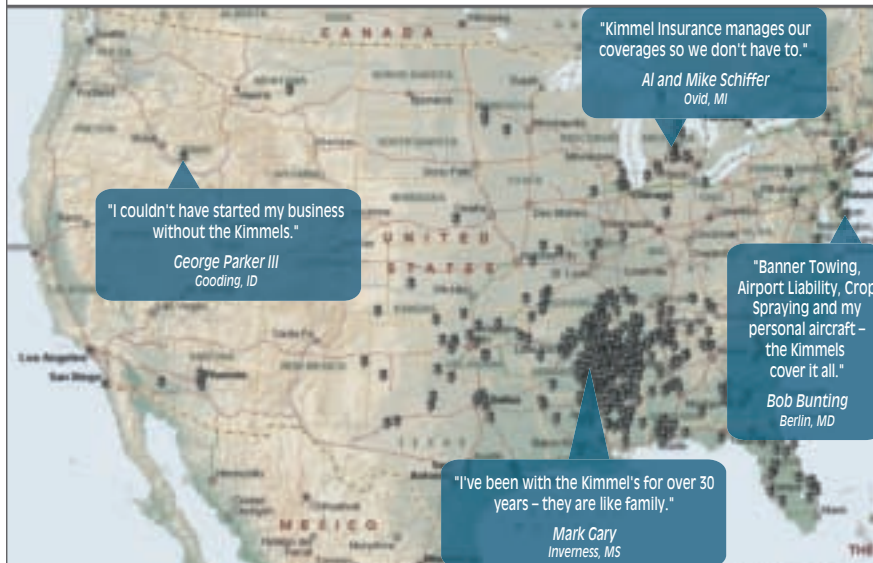
The entry deadline is Aug. 15, 2010. Essays must be 1,500 words or less. Topic deviation and/or modification will not be accepted. Papers submitted will be judged on content, theme development, clarity, originality and proper grammar. All sources used must be cited. Plagiarism will result in immediate disqualification. Entries must be typewritten and double-spaced.

To ensure that the judges will not know the identities of the writer, keep any reference to the author's name, sponsoring company and company location out of the essay itself. However, a title page should be attached, with the entrant's name, address, e-mail, address, telephone number, relationship to sponsor, sponsor's company name, address and telephone number. A photograph of the entrant and short biography should be attached.

One copy of the manuscript should be sent by mail to Patti Cline, WNAAA Scholarship Chair, at 891 Prater Road, Ellensburg, WA 98926. Please send an electronic submission of the essay, by either e-mail or disk, to [patti@centralvalleyheli.com](mailto:patti@centralvalleyheli.com).

**For more information, please visit [www.agaviation.org/scholarship.htm](http://www.agaviation.org/scholarship.htm). The winners will be announced at the 2010 NAAA Convention. ■**

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# Mechanical Breakdown Exclusion: What is Covered?

By Jim Anderson  
NAAA Insurance Committee

## Q. What is the Mechanical Breakdown Exclusion exactly, and how could it apply to my aircraft if I have a loss and I already cover my aircraft for ground and flight in my policy?

A. Mechanical Breakdown is a common exclusion found in aviation policies. The Mechanical Breakdown Exclusion found in most aviation hull policies contains language common to this example:

*This policy does not apply to loss or damage which is due and confined to:*

*wear, tear, deterioration, freezing;*

*any mechanical, hydraulic, pneumatic, or structural malfunction or failure,*

*unless any such loss or damage is the direct result of other physical damage covered by this policy.*

*Damage resulting from the breakdown, failure or malfunction of an engine component, accessory or part is considered mechanical breakdown of the entire engine.*

The exclusion seems simple and straightforward at first, but let's examine some of the components and apply them to some real-world examples.

**Example No. 1:** During a routine inspection our aerial applicator discovers one of the cylinders on the engine has low compression that will require replacement in order to be considered airworthy, which is not caused by an aircraft accident. Since the cylinder was not damaged as a result of an aircraft accident and is the direct result of normal "wear and tear" of the engine and/or the associated components this event clearly falls under the "wear and tear" language of the Mechanical Breakdown Exclusion. Thus, coverage would not exist if a claim were made for the replacement of the cylinder.

**Example No. 2:** Our aerial applicator had an engine failure while in flight that is due and confined to a failure of the fuel pump. Our skilled "Sullenberger" like pilot is able to land the aircraft safely without any other physical damage or incident. Applying the Mechanical Breakdown Exclusion to this event, coverage would not apply to the "failed" components or accessories of the engine (fuel pump) and since there was no other physical damage to the aircraft the policy has no further duty to the Insured.

**Example No. 3:** Same situation as example No. 2, but the aircraft does sustain physical damage that is not substantial enough to be considered a total loss, thus the aircraft is repairable.

The insurance company will be obligated to pay for all physical damage resulting to the aircraft EXCEPT repairing the component that failed, such as the fuel pump in this case.

In all three examples the common thread excluding coverage is the FAILED component, but the policy will respond to any resulting physical damage to the aircraft, if any.

Which leads us to the final part of our Mechanical Breakdown Exclusion example which states:

*Damage resulting from the breakdown, failure or malfunction of an engine component, accessory or part is considered mechanical breakdown of the entire engine.*

This section of the exclusion can apply when a mechanical breakdown event occurs that causes any damage to the engine or any of its components. The exclusion states when the engine suffers "failure or malfunction of an engine component, accessory or part" the entire engine is now excluded from coverage under the insurance policy. To further complicate this exclusion, it is not uncommon for the engine or component to sustain additional physical damage after the mechanical breakdown event due to a forced off field landing. Damage to the engine caused by the forced landing event would not be excluded provided the

damage suffered is not part of the mechanical breakdown event.

Confused yet? Let's examine another hypothetical case where the engine fails in flight due to a mechanical breakdown event, such as a catastrophic failure of a compressor blade in a turbine engine while in flight.

At the time the compressor blade fails the mechanical breakdown exclusion now eliminates the mechanical breakdown of the engine from coverage, but our pilot is now forced to make an off field landing and the aircraft and engine suffer additional damage from the landing attempt. The mechanical breakdown remains an uncovered event, which is confined to the compressor blade and any downstream damage from compressor blade failure event. However, damage caused to the engine and the airframe as a result of the off field landing would

be covered. The difficulty is sorting out what damage is related to mechanical breakdown and what damage is related to the off field landing.

Unfortunately, some policyholders are often surprised to learn after an accident that some or all of the damage to the engine will not be covered by their insurance policy because it is a result of mechanical breakdown and not accident-related.

### Special Message to Turbine Aircraft Operators

Most policies also contain the following additional exclusion usually found somewhere near the Mechanical Breakdown Exclusion:

*This policy does not apply to loss or damage to turbine aircraft engines and auxiliary power units insured under this policy if such damage is caused by:*

*foreign objects unless a result of "ingestion";  
heat or temperature change from the operation, attempted operation or shutdown of the engine;*

*unless any such loss or damage is the direct result of other physical damage covered by this policy.*

"Ingestion" is typically defined as: *damage to aircraft turbine engines or turbine auxiliary power units caused by objects or substances not a part of the engine or its accessories, nor intended to be used in the engine, which occurs during the policy period and is the result of a single incident and of sufficient severity to require (or would require if its severity were known) immediate repair before further use.*

So to apply a few brief examples this exclusion: Failure of any internal component of the engine, such as a

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compressor blade that is passed through the remainder of the engine and causes damage along the way would not be covered. Hot starts specifically are not covered. Sometimes some good news can be found in an exclusion. For example, a bird strike ingested into the engine would be covered and not considered mechanical breakdown.

### Total Loss of the Aircraft

What happens in the event of a total loss of the aircraft that was initially caused by a mechanical breakdown event or engine failure and a forced landing gone bad? The Insurance company would simply pay the agreed value for the insured aircraft. The principles of the mechanical breakdown exclusion are generally limited to aircraft that are not deemed to be a total loss.

### Conclusion

Although the mechanical breakdown exclusion is intended to be simple in nature, due to the nature and variety of aviation claims it can be very complicated to apply in practice.

Understanding this exclusion and how it applies to the aircraft you are insuring is vitally important to the continuity of your aerial application business. The NAAA Insurance Committee hopes this brief article has brought to light a commonly misunderstood and overlooked part of your aircraft policy. Lastly, the best course of action to further explore how the Mechanical Breakdown Exclusion applies to your policy and your aircraft is to contact your aviation insurance broker and discuss the matter in greater detail. ■



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# The Answer is Spinning in the Wind

## Winning Design Revealed in “No Guy Wire Left Behind” Contest

By Ron Cline, Chairman  
NAAA Safety & Federal Aviation Regulations Committee

In 2007, Karen Plath, of Plath Aviation of Oaks, N.D., tried to coordinate an effort to make ag aviation safer in the area where she and her family live and work. She contacted her local utility district to see if they would install markers on guy wires. It was then that she learned the only choice available was the yellow UV markers called “Guy Guards,” which are installed at ground level. The utility company was willing to install the guy guards and charge her for materials and labor. This was not the solution she was looking for.

The ability to identify obstructions is a very important issue to the ag aviation community. NAAA records indicate that during the previous 15 years, almost 14 percent of Part 137 accidents were the result of collisions with power lines or towers including their supporting guy wire structures. Even more shocking is that these accidents accounted for more than 22 percent of the reported fatalities. Many accidents could be prevented if these obstructions were made more visible to the pilot.

Mrs. Plath called NAAA Director of Education & Safety Ken Degg and conveyed the dilemma to him.

Ken went to work with Craig Bair, then chairman of the NAAA Safety & Federal Aviation Regulations Committee, to try to find a workable solution. The problem identified was that there is currently no cost-effective guy wire marker for ag aviation. The next year, the committee, then chaired by me, convened in Washington D.C., and spawned the idea of a contest that would reward \$1,000 to the person submitting the winning design of a visible guy wire marker for ag pilots. This “No Guy Wire Left Behind” contest was initiated in February 2008.

By September 2009 the NAAA committee had 12 designs submitted for evaluation. These designs ranged from high-visibility flagging to suspended surfactant jugs to solar powered strobe lights. The entries were so innovative and diverse that judging became a very complicated task. The winning entry was not unanimously selected but it simply received the most points. The winning entry was submitted by Lewis Blomeley of Albany, Ga., chief engineer for Thrush Aircraft Inc.

Lew’s corkscrew design, which he calls a “Guy Guard,” resembles an auger made of high-visibility, colored plastic

that snaps onto the guy wire. His design is six inches in diameter and 12 inches in length for two complete turns of the screw. However, he adds that the dimensions of the marker could easily be scalable to make it any size that is needed for visibility in



Diagram 1: The “Guy Guard” with its corkscrew design will spin in a breeze causing areas of reflected light, which appear to move lengthwise for high visibility. The illustration shows the rubber retainer below the marker and the installation pole with the positioning tool.



special situations. The marker is held in place by a neoprene rubber retainer that is installed directly below it. The beauty of the installation is the retainer can be pushed up the guy wire to the desired height using a positioning tool with a long handle so that installation can be done without using equipment to hoist the installer above the ground. Of course, this type of installation can only be used for the markers on power line guys and the lower areas of tower guy systems. All that is needed then is for a breeze to spin the marker causing areas of reflected light which appear to move lengthwise making the design effective.

Lew's exceptional idea is illustrated on pgs. 32 and 34. The following judging criteria were used to determine the winner and how the design qualified.

- **Low cost:**  
Initial tooling cost is high but when amortized over a large number of units the per-unit cost is estimated to be as low as \$1.00 ea.
- **Design Appeal/Visibility:**  
The design is esthetically appealing, scalable and highly visible.
- **Move with wind:**  
Design will rotate relative to wind speed.
- **Recycled Pesticide Containers (HDPE):**  
The design could be manufactured from recycled containers.
- **Weather Survival:**  
The design rotates to reduce attachment loads. Rotation friction can be adjusted to enhance endurance.
- **Attachment System:**  
The unit can be installed from the ground with the attachment tool and retainer.
- **Prototype:**  
No working model submitted.



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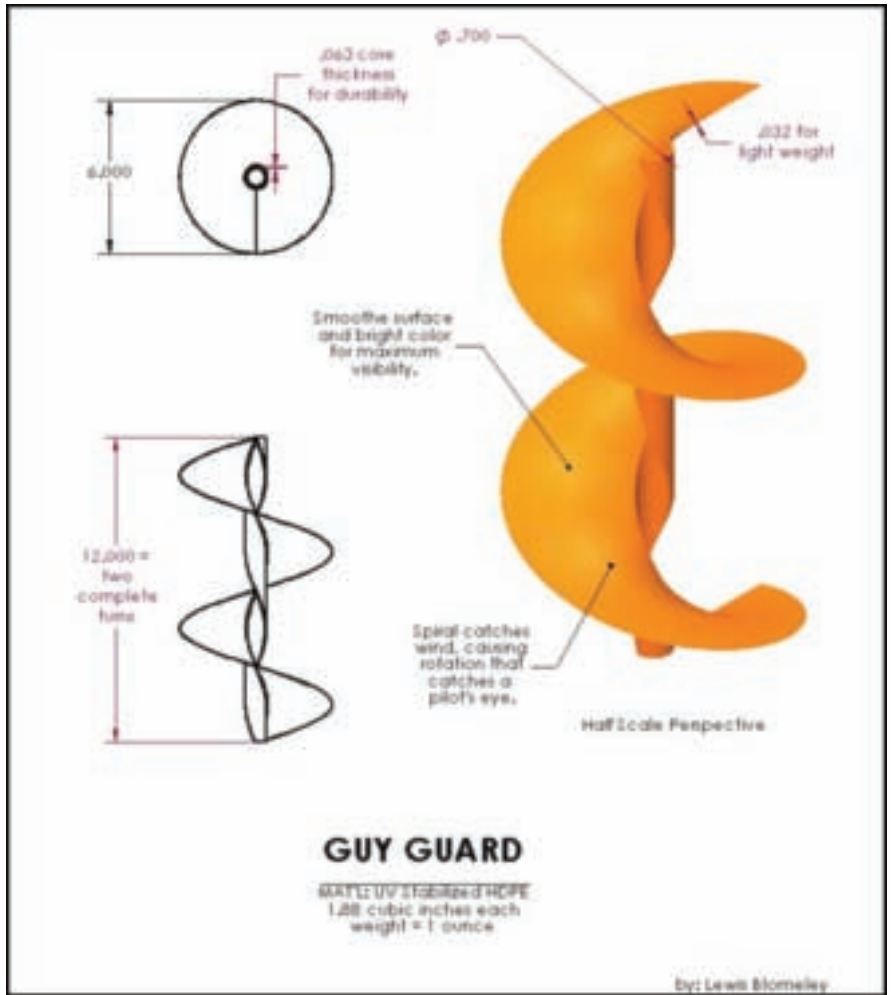


Diagram 2: The basic "Guy Guard," manufactured of high-visibility, brightly colored plastic, is six inches in diameter and 12 inches in length, making two complete turns.



Diagram 3: Neoprene rubber retainer and the positioning tool to be attached to a pole.

Safety is one of the most important mission objectives of NAAA. The most extraordinary example of that model today is the continuing education that the ag aviation industry receives through the PAASS program. Today's ag pilot operates in an environment that is increasingly complex and over-regulated. Economic and regulatory-driven solutions have equipped man and machine with technological capabilities never before achieved in agricultural aviation. We fly more acres per hour with a higher level of precision that not only enhances crop efficacy and reduces off-target drift but ultimately increases the net profit for our growers. We should continue toward this goal and strive to reward our industry with not only ideas but solutions to enhance safety in our lives.

On behalf of the NAAA, I would like to thank Bill Lavender for his help in getting this message out in *AgAir Update*. I would also like to thank the contestants who participated in this contest and offer my sincere congratulations to Lew Blomeley, the winner of the \$1,000 prize. I would also encourage you and all those who strive to make this industry safer to know that we are not done yet. We now need to implement having this new Guy Guard manufactured and installed wherever needed, and are open to any ideas you might have for doing so. The endeavor should continue! The S&FAR Committee will work to continue to move this issue forward. ■

*Ron Cline is Chairman of the NAAA Safety & Federal Aviation Regulations Committee and the Owner/Operator of Central Valley Helicopters in Ellensburg, Wash.*



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# Partnerships That Work: Aerial Applicators and Syngenta

Article provided by Syngenta Crop Protection courtesy of its 2009 NAAA Convention Sponsorship

The aerial application industry has gone through a lot of changes and advancements since Huff-Daland Dusters Inc. first dusted crops commercially in 1923. Up to one quarter of U.S. crops are protected by products applied by air, with more than 3,200 professional pilots and operators in the United States. Application methods have changed from mostly dry chemicals to liquid products, and the focus on which crops need to have chemicals applied aerially has shifted over the years, depending on pest pressure and commodity prices. But one thing remains certain: aerial applicators are an integral part of American agriculture.

With a growing world population and changing dynamics in disease incidence, interest in protecting crops, such as soybean and corn, from profit-robbing diseases has increased, and so has the demand to maximize yield on every acre. Syngenta offers a



One of the ways Syngenta supports aerial application is by sponsoring Operation S.A.F.E. Fly-In events for the past nine years. These events focus on aerial application safety and efficiency.

broad portfolio of fungicides designed to fit your customers' unique needs, including Plant Performance™ brands **Quilt®**, **Quilt Xcel™**, **Quadris Xtra®** and **Quadris®** fungicides. All the Plant Performance brands contain the active ingredient azoxystrobin, which is registered in 100 countries on more than 130 crops and is the leading fungicide in the world.

In 2009, Syngenta added another innovative product to its already strong portfolio of fungicides. As the next evolution of elite systemic fungicides, Quilt Xcel is a powerful new formulation providing longer-lasting residual broad-spectrum control to maximize yield and quality.

“With Quilt Xcel, our goal is to protect the investment the grower has already made with seed and crop protection inputs, and to help maximize his/her yield through greater preventive and curative disease control and optimized Plant Performance,” said Jamie Eichorn, fungicide brand manager with Syngenta Crop Protection. “And by helping produce a stronger stalk, Quilt Xcel allows the crop to better withstand weather stress, making it easier to harvest with less concern about volunteer corn the following season.”

Trials with Quilt Xcel™ fungicide indicated that it not only provides excellent broad-spectrum disease control, but it also can play an important role in minimizing lodging through improved stalk integrity created from the enhanced green leaf area benefit.

“We saw excellent field performance from Quilt Xcel in 2009,” said Eric Tedford, Syngenta technical brand manager. “Results showed better

disease control, which meant healthier plants. In addition, the optimized Plant Performance benefits from Quilt Xcel led to thicker, stronger stalks making the crop better able to withstand winds and soggy fields at harvest. In the end, it all added up to better yield.”

Syngenta Crop Protection not only stands behind the products it produces, it also stands behind the pilots that apply them. Tim Tyree, pilot and owner of Tyree Ag in Kinsley, Kan., continually has a good experience with Syngenta for his aerial application needs. “Syngenta offers a broad base of products, giving us the fit we need for each specific field and pest. They offer good support and their reps are a good source of information.”

By offering proven products that deliver results year after year and backing them with superior service and support, Syngenta remains focused on its partners' need to remain viable in an ever-changing world of agriculture.

For more information, visit [www.farmassist.com](http://www.farmassist.com), [www.quiltxcel-fungicide.com](http://www.quiltxcel-fungicide.com), or call Syngenta Customer Center at 1-866-SYNGENTA (866-796-4368).

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**Important: Always read and follow label instructions before buying or using Syngenta products.** The instructions contain important conditions of sale, including limitations of warranty and remedy. Quilt Xcel and Quadris Xtra are not currently registered for sale or use in all states. Please check with your state or local extension service before buying or using these products.

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## Sweet Sixteen

Syngenta sponsoring NAAA's Leadership Training Program for 16th consecutive year in 2010–2011

NAAA is now accepting applications for the 2010–2011 NAAA/Syngenta Leadership Training Program. Each year, Syngenta sponsors 14 people in the industry to participate in this valuable training opportunity. Please contact your state/regional association director if you are interested in being considered. Each state/regional association can only nominate one candidate per year.

The biggest expense for those accepted into the program is their time. Syngenta covers their airfare, room and most board. Participants will be required to attend the Fall 2010 Board Meeting in San Diego Oct. 8–10 and the Spring 2011 Board Meeting in Washington, D.C., Feb. 18–20. Attendance at the 2010 NAAA Convention in Savannah, Ga., Dec. 6–9 is not required but highly recommended.

The goal of the Leadership Training Program is to provide training to selected individuals in the agricultural aviation industry. The program includes training that enables its participants to develop a strong ability to clearly communicate the important role aerial application plays in the production of our country's agricultural products to the public, media and government. The training also involves teaching techniques to more effectively run and manage an aerial application business and to serve more effectively as a leader while serving industry organizations, such as NAAA and state agricultural aviation associations.

Criteria for qualification include:

- **Ag Operator/Pilot:** You must be involved in an agricultural aviation business. This includes partial or total ownership of a least one agricultural aircraft, and/or a managing employee, stockholder or pilot of an agricultural aviation business.
- **Leadership Involvement:** You must have leadership experience developed from past involvement in regional or state industry associations, community service involvement and/or school or professional organizations.
- **Industry Future:** You must indicate your intent of future involvement in the aerial application industry.
- **NAAA Membership:** You must be a member or an employee of a member who belongs to the appropriate state/regional agricultural aviation association and NAAA or WNAAA.
- **Application & Photo Submission:** Applicants must complete an application to the program listing all of the above.

**The application deadline to participate in the next class is May 7, 2010. You are never too young or too old to start the journey to becoming a better leader! For more information, contact your state or regional association. ■**



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*Operators & Pilots who do not belong to a State/Regional Aerial Application Association must pay Participating Operator or Participating Pilot dues.*

- \$450  Operator  
     \$10 each aircraft over 3
- \$170  Affiliated Operator
- \$900  Participating Operator
- \$170  Pilot
- \$340  Participating Pilot
- \$450  Allied (1–10 employees)
- \$680  Allied (11–50 employees)
- \$850  Allied (51–100 employees)
- \$1,000  Allied (101–500 employees)
- \$1,700  Allied (500+ employees)
- \$170  Affiliated Allied
- \$85  Associate
- \$225  International
- \$680  State/Regional Association
- \$170  WNAAA

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Dues, contributions or gifts to the NAAA are not tax deductible as charitable contributions for income tax purposes. Dues and similar payments may be deducted as ordinary and necessary business expenses subject to restrictions imposed as a result of the NAAA's lobbying activities as defined by Section 13222 – Omnibus budget Reconciliation Act of 1993 (IRS Code 162(e)). NAAA estimates the non-deductible portion of dues paid during calendar year 2009 as 17%. Agricultural Aviation subscription cost (\$30 for domestic, \$45 for international) is included in membership dues for all membership categories.

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Control  
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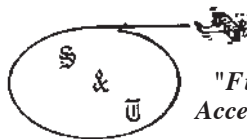
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## BASF Increases Support of Operation S.A.F.E. By Offering New Financial Incentives to NAAA Members

NAAA and BASF, a longtime sponsor of Operation S.A.F.E., are pleased to announce an innovative new program that rewards aerial applicators who participate in Operation S.A.F.E. Fly-In clinics with financial support that can be used towards membership in NAAA or for new spray equipment.

This offer from BASF runs through Sept. 30, 2010. The goals of the program are to encourage aerial applicators to: 1) attend an Operation S.A.F.E. Fly-In; 2) provide an incentive to equip eligible aircraft with new nozzles and/or tips; and 3) promote aerial application optimization, industry stewardship and membership in NAAA.

“This program is certain to enhance professionalism in the aerial application industry whether it directs aerial applicators to join NAAA and access the library of education and communication stewardship services offered by the Association or equip their aircraft with new equipment to ensure precise applications. NAAA appreciates BASF for making this incentive program available,” NAAA Executive Director Andrew Moore said.

Complete details are available in the official program rules at [www.agaviation.org/BASFOpSAFEprgm.pdf](http://www.agaviation.org/BASFOpSAFEprgm.pdf), but in essence aerial application operators can earn a \$225 incentive to be used to help subsidize either 2010 NAAA operator membership dues or up to \$225 of the cost of purchasing new nozzles and/or tips for each eligible aircraft that participates in an Operation S.A.F.E. Fly-In within the program period. Operators may

also be reimbursed \$170 for NAAA pilot membership dues in lieu of reimbursement for new nozzles and/or tips.

This program is available to NAAA members who participate in an Operation S.A.F.E. clinic by Sept. 30. Eligible equipment purchases must occur within the program period. NAAA will provide verification on its Web site ([www.agaviation.org/opsafeattendees.htm](http://www.agaviation.org/opsafeattendees.htm)) of NAAA membership and Operation S.A.F.E. Fly-In participation once the Association receives proof of participation by the fly-in organizer or the S.A.F.E. Analyst who conducted the clinic. If the aircraft is not flown by the operator member, the pilot flying the aircraft at the clinic must be an NAAA pilot member to be verified on the Web site.

Operation S.A.F.E. was designed to demonstrate that aerial applicators recognize their responsibility to ensure precise agricultural chemical application. Operation S.A.F.E. clinics give operators and pilots the opportunity to test equipment with a trained analyst to help interpret the information and to recommend changes to improve performance. In addition, participating applicators agree to submit voluntarily to an inspection of their aircraft and recognize the importance of using safe operating procedures. NAAA encourages every operator and pilot to participate in an Operation S.A.F.E. clinic annually.

“Operation S.A.F.E. fly-ins are a great opportunity for applicators and one of the best means of evaluating spray patterns, droplet size and application precision,” said Tony Goede, Plant Health Coordinator for BASF and recently certified Operation S.A.F.E. Analyst. “BASF also is working hard to increase participation and NAAA membership, for the good of everyone in the industry.”

For more information on BASF’s NAAA membership/equipment incentive program, visit [www.agaviation.org/BASFOpSAFEprgm.pdf](http://www.agaviation.org/BASFOpSAFEprgm.pdf). The last page of the PDF contains a reimbursement request form. ■





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