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NESS-essary Experience

NAAA chooses new Pilot in Command
DANA NESS as its 2013 President

ALSO INSIDE:

- Savannah Charms NAAA Conventioneers Again
- Meet the 2013 Officers
- Ag Retailers Impressed with Aerial Application Service

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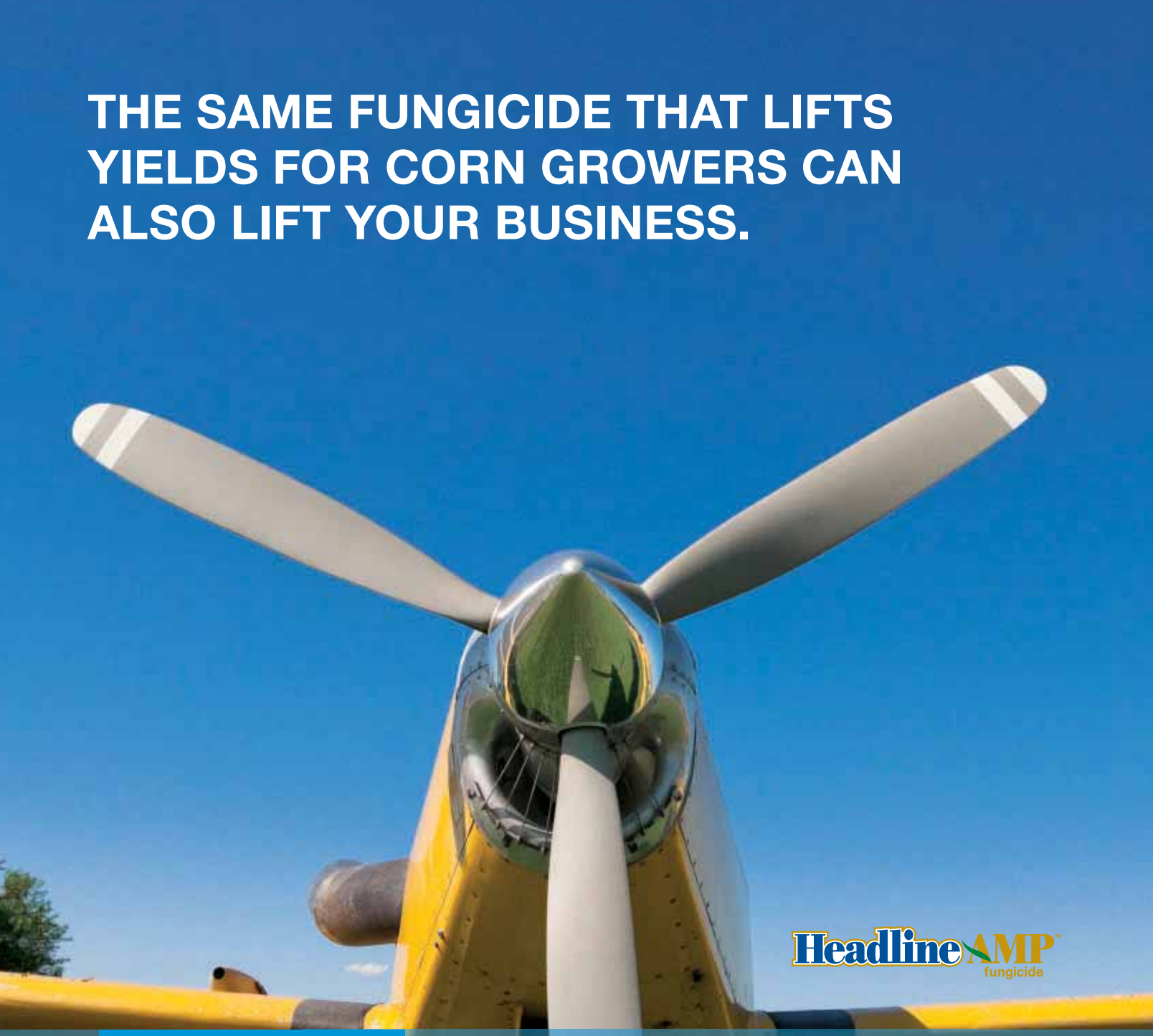

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The purpose of NAAA shall be to advance the aerial application industry and its members in their efforts to enhance agriculture, and to protect the public health and the environment.

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Contents

ON THE COVER

New NAAA President Dana Ness

ALSO INSIDE:

Show's over, folks, but a jolly good time was had by all at NAAA's 46th Annual Convention!

Cover photo by Randy Thompson, Randy Thompson Photography

COVER STORY

Plus:

FEATURES

NOTES

DEPARTMENTS

Agricultural Aviation is the Official Publication of The National Agricultural Aviation Association

President's Message

Dana Ness

Making a Strong Voice Even Stronger

I would like to thank the association for bestowing upon me the great honor of serving as its 2013 President. I will strive to serve NAAA and all of the membership in any challenges that arise. Given the current political environment, this could be a daunting task! Helping support the association for 2013 is a very qualified officer team of Rick Boardman (Nebraska) as Vice President, Doug Davidson (Arkansas) as Secretary, Brenda Watts (Arkansas) as Treasurer, Dona Jorden (Texas) as WNAAA President and Randy Hale as NAAREF President.

I would also like to recognize and thank 2012 President Mark Hartz (Arkansas) for his quality leadership, as well as the entire 2012 leadership team: Vice President Leif Isaacson (Idaho), Secretary Gaylon Stamps (Texas), Treasurer Kyle Scott (Colorado), Kathy Diehl (Kansas) as WNAAA President, and last but definitely not least Rod Thomas (Idaho) as NAAREF President.

One of my major goals for this year is to help show members and non-members the incredible value this association represents. If you look at any one of the many groups that would like to see our profession greatly reduced or worst case scenario completely gone, they possess large memberships, much larger than our association. While these groups have larger numbers they don't have the great association we have—that the NAAA founders created 47 years ago. NAAA is constantly advocating for the industry and fighting an ever-increasing number of issues that are working to diminish the industry. Just a couple of examples of this are the NPDES permitting system, of which the association was able to clarify and soften certain aspects before implementation, as well as ongoing work on tower issues. NAAA also has a seat at the table on EPA's Pesticide Program Dialogue Committee which takes input from stakeholders on all policy issues the agency is considering related to pesticides.

If the entire industry could see how hard the NAAA staff and board work on behalf of its interests, I believe most all would be very impressed. I would like to thank the membership for their continued support and encourage non-members to please consider joining. NAAA is the only voice in our industry, and we need the support of all involved to continue to have that strong voice. NAAA has just taken a major step by moving into its new office location in Alexandria, Va., last August, which is a step up in the association's ability to serve its membership to the fullest. The new office will allow for additional space as well as additional staff as needed.

One of my major goals for this year is to help show members and non-members the incredible value this association represents.

I am amazed every year at the new and ever-growing number of improvements made on the technological front, whether it is new nozzle technology or improvements to the capabilities of the GPS systems we use, or even the new aircraft that continue to develop. It is truly a different industry today than the one that started so many years ago. All of these improvements have been for the better, and I believe it is important to point the differences out, since we are constantly making improvements to help support an ever-growing world population.

I have enjoyed meeting many of you at the state conventions I have attended so far and look forward to meeting many more as I continue to travel to more of these in the future. I look forward to the opportunity to represent this great industry as your 2013 President. I wish everyone a safe and prosperous year ahead. It should be an exciting time. ■

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Executive Director's Message

Andrew Moore

Consider These New Year's Resolutions to Benefit Your Industry

At NAAA, the staff does its best to meet the objectives outlined in Article II of the NAAA Constitution, which include, but are not limited to the Association being the "recognized public policy advocate for the agricultural aviation industry; the primary resource for agricultural aviation knowledge exchange, education, and business services … and the public's professional source of agricultural aviation industry information and education." The fact of the matter is staff cannot do this alone, nor was it intended that we do it alone, and we certainly do not. NAAA and its sister organization NAAREF have a slew of dedicated volunteers that make these two organizations effective. But there is always room to strengthen our cause. As 2012 President Mark Hartz so aptly stated, "We all need to step up, contribute our time and effort, and serve as patriots to the industry."

To be effective "public policy advocates," staff organizes a PAC fund to contribute to candidates running for federal office and meets with federal officials constantly to make known to them how government policies affect the aerial application industry. However, it takes a whole army of ag aviation operators, pilots and allied members to volunteer their dollars to the PAC and, more importantly, volunteer their time to write or visit a government agency or congressional office to truly make a difference in influencing policy.

As a former congressional staffer I know how important a constituent visiting, writing and calling his or her legislative official is. It can influence a vote, particularly when done en masse. Reaching out and getting to know your public officials can make all the difference. Let me give two examples. When NAAA was urging the enactment of legislation for an exemption to the federal aviation excise tax on fuels used for farming purposes it was NAAA's Arkansas members and their close relationship with their U.S. senator at the time, Blanche Lincoln, that made the difference. Lincoln was a member of the Senate Finance Committee, which has jurisdiction over tax laws, and moved our legislation through that body. Lincoln had a long relationship with aerial applicators in Arkansas, many of whom flew her across the state when she was campaigning.

On the House of Representatives' side of the Capitol, our legislation was assured of passage once the House Ways and Means Committee Chairman gave it his blessing. The Chairman of that committee at the time was U.S. Representative Bill Thomas of California. NAAA member and aerial applicator Delbert Williams of Tri-Star Agrinautics in Wasco, Calif., who was a constituent of Thomas, personally visited with his district office in Bakersfield, Calif. These two federal legislators were instrumental in the fuel tax exemption's enactment, and it was NAAA volunteer members who had a profound effect in moving these legislators to act on our behalf.

In 2013 we will see many new faces in Congress. We continue to face federal debt, currently at $16 trillion, that threatens our fuel tax exemption and poses the possible levying of user fees at public use airports as a means to raise federal dollars to combat the debt. We also face growing safety threats from towers, Unmanned Aircraft Systems (UAS) and other obstacles, in addition to the new burden of NPDES permits and pending drift and bee protection regulations. Being strong politically will be vital for the well-being of our industry as we seek to influence these policies so they take into account our best interests. I would encourage you to do what you can to write letters to federal legislators and regulators when requested via NAAA or state association grassroots alerts. Also, establish a relationship with your local, state and federal policymakers and contribute to their campaigns if they are friends of our industry, and please contribute to NAAA's AgAv PAC.

Recruiting an Army of Ag Aviation Advocates

Effectively being a "primary resource for agricultural aviation knowledge exchange, education, and business services … and the public's professional source of agricultural aviation industry information and education" is one job. Effectively advocating the content of these resources is quite another. NAAA staff spends a lot of time putting together substantive educational, informational and promotional materials for and about the industry. We also field press calls, speak at public forums and distribute our information to a wide list of media, government, and other public entities and educational outlets. But to permeate the public we need a solid army of advocates.

We develop the original life-saving, stewardship-enhancing educational content for PAASS each year, but it is the platoon of PAASS presenters delivering the material at the state associations where the material reaches and positively affects the actions of our aerial application troops. The same goes with the substantive information we produce at NAAA such as the new Media Relations Kit and the Aerial Application Industry Survey. Both contain a wealth of demographic information about the industry and information on the industry's importance, safety, security and environmental stewardship.

If there aren't industry soldiers taking the substantive content of the Media Relations Kit to the public—whether it be to educators, to schoolchildren, to the local media, to boy and girl scout troops, to local government officials at town hall meetings, etc.—our industry's reach won't be nearly as extensive if just left to the NAAA Board, our staff of seven, and state associations. For an example of how volunteerism extends our reach, see pg. 66 for an article about NAAA Board representative Jeff Chorman's participation in an aviation career expo, and the positive effects that experience had on students and educators.

Let's face it, President Obama didn't win the Presidency by going at it alone. He had active troops in every state in the union, in every county in each state and in every township in every county advocating a message that effectively delivered to him, like it or not, the most powerful position in the world. Effectively advocating professional aerial application as an invaluable tool resulting in the safe and affordable production of food, fiber, and biofuel, and forestry and public health protection works exactly the same way. Many troops spread throughout the country are needed.

At NAAA, the Board and staff promise to deliver materials and to deliver advocacy, but we need your help. Please make a New Year's resolution to benefit this great industry of ours.

AG AVIATOR NEW YEAR'S RESOLUTIONS

Host a Field Day at your operation inviting students, educators, media, public officials/policymakers, etc. and educate them on the importance, safety, security and environmental stewardship of agricultural aviation (see the NAAA Media Relations Kit for talking point suggestions at: *www.agaviation.org/content/naaa-media-relations-kit).*

Write or visit with your local, state and federal officials on issues important to the agricultural aviation industry. Respond to grassroots requests from your state association and NAAA when asked to send correspondence to your public officials to influence particular public policy initiatives.

Establish a relationship with your local, state and federal government officials; contribute to their campaigns if they are supportive of industry interests.

Contribute to the AgAv PAC which supports the (re)election campaigns of federal policymakers supportive of the ag aviation industry.

Participate in the activities of NAAA or your state/regional association as a board member, committee member, PAASS presenter or volunteer at the FFA, Commodity Classic and Agriculture in the Classroom conventions that the WNAAA attends (or other such events) to recruit future ag pilots and bestow the benefits of ag aviation to farmers.

Urge your fellow industry members to join the state/regional association and NAAA. There is strength in numbers and resources.

Attend PAASS, Operation S.A.F.E. and state and national conventions annually.

Operate professionally/ethically.

Keep your operation and aircraft equipped with the latest security-enhancing and drift mitigation equipment.

Some suggestions on how you can be an agricultural aviation patriot are offered in the accompanying sidebar. ■

WNAAA President's Message

Dona Jorden

Managing a New Part

For those of you who may not know me, I am the parts manager for Lane Aviation Inc. in Rosenberg, Texas. When I came to Lane Aviation 20 years ago, I knew nothing about aircraft or the ag aviation industry. I was hired to do clerical work for their parts department. As I worked at my daily job duties, I became more involved with parts sales and service. I enjoyed interacting with the customers and vendors. With a lot of help and a ton of patience from co-workers, vendors and our customers, I began to learn more about parts and the ag aviation industry. I decided this was a career I wanted to pursue.

I can honestly say I love my job. I learn something new every day. I work for a corporation with solid business values, integrity and a "customer first" attitude. Those are just some of the attributes that make me proud to be an employee of Lane Aviation.

Working as a supplier of ag aircraft parts has allowed me the opportunity to attend conventions and meet new people. This is how I began to learn about the industry and what it stands for.

A few years ago, I received a phone call from the WNAAA asking me if I would be interested in serving as its allied director. Of course, I was honored to be asked. I agreed, wanting to learn more about the WNAAA. Let me tell you, these women blew me away! In my world, I had only supplied the aircraft parts, so I really didn't know what it meant to be an ag pilot or an ag pilot's wife. I was in awe of their dedication and stamina.

As I listened to the women talk, I could not believe my ears! They load hoppers, fuel planes and do everything necessary to get their pilot(s) and aircraft up in the air and back down safely. Not only do they serve as the ground crew, they run their offices and care for their families. It was inspiring to hear their stories and see the passion they showed for the industry. I was in hook, line and sinker! I definitely wanted to be a part of this organization.

Members of the WNAAA at the 2012 WNAAA Convention in Savannah, Ga.

During the years I have served as allied director for the WNAAA, I have learned so much from the women of the WNAAA and have developed wonderful friendships. I am delighted to be chosen to serve as the 2013 President for such a dynamic organization as the WNAAA. I will make every effort to uphold the commitments put before me and to maintain the mission of the WNAAA: education, communication and positive promotion of the agricultural aviation industry.

Working with me are three ladies who are devoted to serving the ag aviation industry:

- Vice President Leslie Craft (North Carolina)
- Secretary Erin Morse (Washington)
- Treasurer Kelli Bartholomew (Iowa)

We, as upcoming officers, will be hard pressed to follow in the footsteps of those who served before us. Our past leaders worked very hard to implement new ideas that will support the stated mission of the WNAAA. I would like to thank the 2012 officers for their time and commitment to the WNAAA. They are:

- President Kathy Diehl (Kansas)
- Vice President Pat Stamps (Texas)
- Secretary Leslie Craft (North Carolina)
- Treasurer Erin Morse (Washington)

I would also like to thank the directors and their committees for their hard work in making good ideas a reality and making the past year a very successful one.

"The achievements of an organization are the results of the combined effort of each individual."

—Vince Lombardi

Any woman associated with the ag aviation industry will benefit by becoming involved in the WNAAA. It is a wonderful networking resource and learning tool. Everyone can contribute to promoting the ag aviation industry. Whether you are a spouse, employee or business owner, your ideas and visions for the future of ag aviation are important and need to be heard. By becoming active in this organization, you can make a positive impact on issues that concern your business and your livelihood.

I look forward to working with both the WNAAA and NAAA on projects already in progress as well as new ideas and insight for education, communication and positive promotion of the ag aviation industry. ■

Washington Report

By John Thorne

Four More Years: What Does a Second Obama Term Mean for NAAA Members?

President Obama's reelection is being welcomed by environmental groups, optimistic that a second term will bring renewed focus on the environment and an aggressive government response. The president's Nov. 6 election victory over former Governor Mitt Romney is bolstering environmentalists who say the win is a rejection of Republican efforts to block stricter environmental rules and provides an endorsement of current programs. In a Nov. 6 statement the Sierra Club noted that despite unprecedented election spending by "big polluters to defeat him," the electorate chose a president "who stood up for landmark protections to keep toxins out of our air and water."

During the 2012 presidential campaign, the environment was hardly mentioned. Despite what environmental groups anticipate, now that the election is over it is not clear to what extent the president will unleash a renewed green agenda. Republicans still retain control of the House, and are likely to continue their aggressive oversight hearings and challenges to what they say is overreach by EPA that is hurting jobs and the economy. Worries about solving the budget deficit, avoiding indiscriminate spending cuts under sequestration, expiring tax credits, immigration, and dozens of other issues surely will be top of mind for the president for most of 2013. In addition, Obama has cabinet and agency changes to make, judicial nominations for key courts as justices retire and the supervision of the military drawdown from Afghanistan.

There was a conscious effort by the Obama administration throughout the campaign to remove regulatory ammunition from the GOP, resulting in a backlog of regulatory actions that are likely to go forward now that the election is over. Environmental activism, hopefully tempered by the common sense of four years in the White House, is still going to be a key aspect of a second Obama administration. The following information looks at some of the considerations that will determine what "four more years" means for aerial application and other American businesses.

Backlog of Regulatory Actions

Throughout the presidential campaign, the administration bottled up all potentially controversial regulations at the Office of Management and Budget (OMB), the White House's clearinghouse for almost all regulations. OMB typically reviews proposed rules for up to 60 days, sends them back for major edits, and sometimes kills them. Holding back such regulatory actions during the campaign had the desired effect of taking the environment out of the presidential debates, but now there is an agenda full of regulatory actions that the Obama administration could advance over the next four years.

These include guidance to expand the definition of "waters of the US" subject to Clean Water Act (CWA) regulations, under review by OMB since May. This guidance, and a subsequent rulemaking EPA is planning, would more broadly apply regulatory controls over ditches, minor tributaries, "intermittent" streams that can go dry during the year and wetlands that are geographically isolated. This policy change could affect NAAA members by greatly expanding the waters subject to pesticide NPDES general permits.

A range of significant EPA rules and programs affecting agriculture are likely to move forward in the next four years that could further regulate and restrict crop protection product applicators, including potential bee protection regulations, pesticide spray drift label requirements and a drift reduction technology (DRT) verification program, as well as additional nutrient restrictions in key watersheds like the Chesapeake Bay. In the third and fourth years of the second Obama administration, EPA will rewrite and likely strengthen EPA's pesticide NPDES general permit at the time of its five-year

renewal window. Changes made by EPA to its permit will also likely trickle down to states and their permits.

In addition, the U.S. continues to face federal debt, currently at $16 trillion, that threatens our fuel tax exemption and poses the possible levying of user fees at public use airports as a means to raise federal dollars to combat the debt. We also face growing safety threats from towers, Unmanned Aircraft Systems (UAS), as well as other obstacles. NAAA and its agricultural allies will be closely watching for such proposed rules and engage as needed during their development.

Farm Bill as Potential Vehicle to Overturn NPDES Permitting

Reauthorization of the expiring five-year farm bill was stymied by the reelection campaigns in Congress and the president, as well as broader concerns over the budget. A farm bill was passed by the full Senate in June of 2012 and by the House Agriculture Committee in July of 2012, but failed to see movement leading up to the November elections. Many in agriculture and Congress alike were pushing for work on the farm bill during the lame duck session between the elections and the swearing in of the new 113th Congress. But with a full agenda ahead of them, it was uncertain whether lawmakers would move forward with the farm bill other than to pass a one-year extension of current authorizations.

There were attempts made to attach a provision exempting pesticide applicators from needing NPDES permits to the full farm bill as well as stand-alone pieces of legislation or onto some other piece of high-profile legislation during the lame duck session. However, legislative sponsors were hesitant to include controversial amendments that could delay or prevent passage of the farm bill or any other major piece of legislation. NAAA and its allies felt HR 872, the House-passed legislation to overturn the 6th Circuit decision requiring pesticide NPDES general permits, was the best option for inclusion in the farm bill and worked diligently to see it come to fruition. However, the 2008 farm bill has simply been extended until September, and efforts to enact NPDES PGP relief will have to start again from scratch this year.

2013 Will Be Busy

Without major changes to the political landscape and a basic status quo within Congress and the White House, legislative action in the new 113th Congress will likely begin quickly and remain at a fast pace in hopes of accomplishing much on both sides of the aisle.

For agricultural aviation how the elections will influence future policy has yet to be seen. According to a Farm and Rural Poll by *Agri-Pulse*, the three biggest threats facing farmers are environmental regulations, taxes and activist groups that oppose modern farming methods. There's some sense that the president now has nothing to lose in pushing ahead with a green agenda. But balancing the budget, growing the job market and promoting energy development will likely take the spotlight, at least in this first year of President Obama's second term.

NAAA vows to continue to protect the interests of ag aviation in Washington, reach out to meet the newly elected policymakers, closely monitor policies and regulations that could adversely affect agricultural aviation and pursue support for legislation favorable to our industry. The Association encourages members to stay abreast of all pertinent topics via the NAAA eNewsletter and NAAA's website at *www.agaviation.org*. ■

John Thorne, Ph.D., recently joined the public policy practice of Bergeson & Campbell, PC as Senior Government Affairs Counsel. Dr. Thorne is a leader in the areas of agricultural and pesticide industries and brings extensive experience with related regulatory, legislative and policy issues. His areas of expertise include water and air environmental policy; pesticide and fertilizer use policy; food production and processing; biomass crop and bioenergy policy; livestock regulatory issues; toxic science and regulatory issues; sustainable agriculture policy; and nonprofit and coalition management. Dr. Thorne holds an undergraduate degree in agronomy from Washington State University and an M.S. and Ph.D. from Purdue University. Most recently, Dr. Thorne was a senior policy advisor in the Washington, D.C., office of Crowell & Moring LLP, and from 1993 to 2004 was managing director of Capitolink LLC.

NESS-essary Experience

DANA NESS isn't one to toot his own horn, but his impressive credentials speak volumes about the man chosen to serve as NAAA's 2013 President

Experience is critical in leadership positions. The NAAA President is definitely not an exception to this rule. So who better to have gripping the gavel this year as NAAA's 2013 President than Dana Ness who first began fueling, cleaning the windshield and washing his father's ag aircraft 37 years ago at Ag-Air Inc. in Rudyard, Mont., when he was just six years of age. Since those first beginnings in the industry he's been an ag pilot, managed an aerial application operation, held all leadership positions of the Association of Montana Aerial Applicators (AMAA) and served on the NAAA Board for nine years, including Treasurer in 2009 and Chairman of the Membership Committee for the past year.

Dana Ness, at his operation in North Central Montana.

According to 2009 NAAA President Doug Chanay (Kan.), "He has a good understanding of the association because of his longstanding service." Experience is in abundance with Ness and it will prove useful for him and the aerial application industry as he takes on the industry's top job this year.

Ness is a quiet but effective leader. He does not readily make known his achievements, but if you research his record you see a trail of accomplishments, steadfastness and consistency. In the year he has served as NAAA Membership Committee Chairman, NAAA's membership has increased five and a half percent at a time when the industry has seen a decrease in the number of aerial application operations nationwide.

Ness' operation, Ag-Air Inc., which operates in both Rudyard (named after the famous English writer, Rudyard Kipling, chiefly remembered for his tales for children, such as *The Jungle Book* and *Gunga Din*) and Chester, Mont., will celebrate its 50th anniversary this year due to its consistent, quality service. As NAAA Treasurer in 2009, Ness was in charge of NAAA's checkbook and responsible for a surplus in Fiscal Year 2009–2010 of over $240,000 while at the same time diversifying NAAA's assets to allow for some reserves to be invested in higher yielding financial instruments. He has also been a steady, dependable volunteer for the AMAA, serving on its Board or on behalf of the AMAA on NAAA's Board since the mid-1990s.

WHAT MAKES THE MAN

Ness' stoic, industrious demeanor stems from his Scandinavian roots. His paternal grandparents emigrated from Norway. His grandfather came to the U.S. as a boy. He worked in the gold camps in Alaska and as a cook in the lumber camps of California before settling in Montana and taking advantage of the "farmland ownership at no cost" policy of the Homestead Act. According to Ness, "He was a workaholic." Grandfather Ness farmed wheat and opened a lumberyard. The next generation of the Ness family took on aerial application. Dana's uncle started Ness' flying service, and when Dana's father (Buster) completed his military service as a paratrooper in the Army he returned home, helped with the family farm, helped his brother do spraying in the Rudyard and Chester, Mont., areas and he formed Ag-Air Inc. in 1963.

Dana's uncle passed before Dana was born in 1969.

"I grew up around it," Dana says about the operation. "It was always my desire to pursue it, but Dad didn't encourage it." At age 19 he earned his private license, "but … needed an education to back it up," he said, so he became a Bobcat—a Montana State University Bobcat. There, in Bozeman, Mont., he took a number of general studies and business management courses. He thought airlines would be glamorous for a while, "but then realized it's more like being a high-paid babysitter," says Ness. He earned his commercial and instrument ratings at 23. He left school and went back home to work where his Dad had expanded the business and was retailing fertilizer in seven different locations in North-Central Montana. In 1995 at age 26 he started flying ag.

Montana is where Dana loves to be. To him it is a little slice of heaven. "I think it's just a personal utopia to raise a family here, farm here and have an aerial application business here," he says. He and his wife Courtney, who despite being a Grizzly from the arch-rival University of Montana, have kept a peaceful home and are raising two children: daughter Maren, age seven, and son Aiden, age four. "Having kids changed my whole perspective on everything," Ness said. "Everything I think about now is how I can I do something to help them whether it be completing a job to get back to them or to provide for them." According to Chanay, "He is a family man, very honest and sincere. I think those are both good qualities that he has."

WHAT MAKES THE OPERATION

Dana is now the man in charge, as Buster passed away six years ago. In regard to how he now runs the business and has now been asked to lead NAAA, Colleen Campbell, executive secretary of the AMAA, who along with her husband Mike runs Campbell Aviation in Dutton, Mont., says, "His Dad would have been extremely proud of him, and I know his mother is extremely proud as well."

Dana and Courtney Ness have two children, Maren and Aiden, ages seven and four, respectively.

NAAA's outgoing president, Mark Hartz, passes the gavel to Ness, signifying a changing of the guard, at NAAA's Farewell Banquet in Savannah, Ga., last month.

Dry land farming is how crops are grown in Dana's area of Northern Montana. There are only about half a dozen pivots in his marketing area, which is about 4,000 square miles or 2.5 million acres, and the cropland is at 3,200 feet elevation. In the late fall it looks like a checkerboard. The fields appearing a whitish tan in color with the harvested wheat stubble protruding from the ground. Forty miles to the northwest rising to about 6,500 feet are the Sweet Grass Hills and to the southeast the Bear Paw Mountains. Ninety percent of this country is wheat with some barley and pulse/leguminous crops—such as peas and lentils. Annual rainfall is 12–14 inches so moisture preservation is important. The wheat stubble is left in the ground to retain soil moisture and not lose topsoil during windy falls. Dust storms are less common today as a result.

Ag-Air Inc. runs two piston Air Tractor 301s between Chester and Rudyard. Aerial application is about 40 percent of the work; retailing chemical is 60 percent. Dana also farms 900 acres of wheat. The company has five employees: two pilots including Ness, a secretary and ground crew managers in Chester and Rudyard. Hours flown per aircraft each year are around 190, although that figure expanded to 250 hours last year due to an outbreak of rust on the wheat. Only about two percent is insecticide work for grasshoppers and other pernicious pests. Herbicides are the lion's share accounting for about three to four applications in a crop's life.

WHAT MAKES THE LEADER

Leaders are characterized as being on the cutting edge of adopting new technologies; leaders are actively engaged and tend to be overachievers. Dana fits those characteristics but in a soft way. "He is soft-spoken and quiet in regard to his achievements. Although he is very deserving of the

NAAA presidency, he would be the last one to pat himself on the back," said AMAA's Campbell.

Ness can often be found pushing his limits of knowledge about the industry. He has installed flow control sensors/meters on his aircraft to maximize his application efficacy. He can be found gleaning knowledge on an annual basis at the ASABE (American Society for Agricultural and Biological Engineers) Technical Session held annually at the NAAA Convention. The state of Montana requires 12 agricultural and/or application continuing education units (CEUs) be earned every four years before an applicator's license may be renewed. The state offers four CEUs for PAASS each year—Dana currently has 83 CEUs!

He also does his homework before taking on his volunteering assignments. "He called me during the NAAA presidency nomination process to ask me questions about what it would be like," said Chanay. "He researched before he accepted to know more about what he will be up against. That's what he does before he gives an answer. He is a very knowledgeable person, and he'll be a quiet but strong leader."

He acknowledges his NAAA membership has helped him augment his industry knowledge and assisted his business through the many connections he has made. "NAAA networking is huge," said Ness, "I have gotten great advice from [2009 NAAA President] Doug Chanay on pilot issues, application recommendations and on association management issues. Networking also enabled me a backup aircraft supply last year during my busy wheat rust run."

Ness' knowledge and industriousness have not been hoarded for his own use. He has shared it and used it to benefit the industry organizations he has served and it has been recognized. In 2005, he was bestowed with the Eagle Award from the AMAA for service above and beyond the call of duty.

> **He is a very knowledgeable person, and he'll be a quiet but strong leader.**
>
> **—2009 NAAA President Doug Chanay, whom Ness served under as NAAA Treasurer**

He was also an NAAA Falcon Club awardee in 2009, which is presented by the NAAA President to individuals who, through personal effort and dedication, have made substantial contributions to the agricultural aviation industry and NAAA. Ness is not just a leader in the AMAA and NAAA, he is also a community leader. He has served as a volunteer firefighter for 19 years and is the current chief of the Rudyard Fire Department.

THE VISION

Well roundedness and experience are what build wisdom in a person and provide the ability to have an achievable vision for an organization. Ness understands this. He understands the importance of establishing relationships in resolving issues. He has been engaged with the state of Montana's Ag Department for years. "This has allowed the two entities to tackle any problematic issues that arise immediately before they grow out of proportion," said Ness.

The importance of this was reiterated for him as well as a member of the NAAA Board of Directors. "There are a lot of forces working against us outside of the state," he said. "The train is coming down the tracks and if you don't get on board it will run right over you," he tells aerial applicators in Montana and nationwide as a reason to actively engage. He saw what NAAA could do in terms of enacting a positive policy for the industry by providing a full and complete federal excise tax exemption levied on fuels used aerially for farming purposes. "That opened people's eyes," he said. Now he wants to see NAAA work to complete its efforts to eliminate the Clean Water Act NPDES-PGP requirement for pesticide applications made over or near water. "The [regulation] could grow in definition and scope … and is the biggest challenge to any applicator," he says.

One of his biggest focuses as president is to see a dramatic increase in membership. "Membership numbers have been improving, with a smaller number of application businesses," says Ness. He is optimistic this trend can be sustained and realizes it is important to do so to provide the necessary weight for the association to be effective in its government relations and public relations endeavors. "There is not a more reputable brand in the industry than the NAAA. The brand has helped us grow; for me it's all about continuing the momentum." He also believes the

PAASS Program has been crucial to both keeping regulators at bay and enhancing the NAAA brand.

Looking forward, Ness is optimistic about the aerial application industry and its role in modern agricultural production. "Aerial application has been somewhat underutilized in my neck of the woods, but after the rust boom last year farmers got a taste of its importance like they had with corn in the Midwest," he said. "In the last 30 years technological advances have really helped increase corn production, but they have yet to occur at such an increased level with wheat and a number of other crops. I believe that is about to change which will benefit aerial application and modern agriculture."

Ness poses with one of Ag-Air Inc.'s two piston Air Tractor 301 airplanes.

Other industry leaders have the same optimism about Ness. NAAA's 2011 President, Rick Richter, says Dana "shows his professionalism and his dedication to the NAAA on any job that he takes on. He shoulders responsibility very well, and I'm sure he will carry that on and be a good president and leader for NAAA in 2013 and beyond." Outgoing 2012 NAAA President Mark Hartz echoes that sentiment by stating, "Dana Ness is an astute individual, who by his willingness to serve NAAA as its president for 2013 will work to ensure NAAA continues on its mission of advocacy for our industry. Our association will be well served with Dana as our next president."

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2013 NAAA Officer Spotlight

By Colleen Isaacson
Contributing Writer

NEW NAAA VEEP IS A REAL BOARDMAN

RICK BOARDMAN
NAAA Vice President

Boardman Aerial Spraying Inc.
Henderson, Neb.

Rick Boardman was practically groomed from birth to be an ag pilot. Growing up, his father owned and operated Boardman Aerial Spraying Inc. in Henderson, Neb. With his father as his mentor he started crop dusting in 1984 and six years later he and his brother purchased the business. Three years ago he sold the company to a local co-op and now operates the business for them. He and his three pilots fly Air Tractors and Thrushes and treat mostly corn, beans, pastures and seed corn.

Boardman has continued the family affair, as his wife of 26 years and two daughters have been fully involved in the ground operations, office work and cooking for the crew. He's most proud of "being able to do what I enjoy doing and having my whole family involved and around all the time." He says, "Either of my daughters could run the show … and they have."

Hard work comes easy to Boardman; it's the relaxation he has trouble with. "I feel my best when we're busy. Just working and flying relaxes me."

Although it is tough for him to settle down, he enjoys riding motorcycles, off-roading in their Jeep and traveling to their home in the Black Hills.

Staying Involved

Boardman has served on the Nebraska Aviation Trade Association's board numerous times but it wasn't until he attended the NAAA/Syngenta Leadership Training Program four years ago that his involvement really progressed. He became an NAAA representative for his state in 2009, and in 2012 was involved in the production of a safety module for the PAASS Program, the safety education program produced by NAAA's sister organization, the National Agricultural Aviation Research & Education Foundation (NAAREF). "I think it's good for us to hear about what has happened, and I really think it makes guys listen, pay attention and think about what they're doing," said Boardman, alluding to the Human Factors module he took part in for PAASS.

For Boardman, the No. 1 reason for people to be a part of NAAA is, "More power in numbers. With all the regulations that are coming, we're going to have to stick together and make sure we're on top of it. Our staff in Washington is doing a great job keeping us informed and we really need that. The guys that don't belong [to NAAA] are kind of riding on our coattails."

Without strength in numbers the fuel tax exemption as well as many other benefits NAAA has delivered will be at risk. In fact, the fuel savings alone is more than enough to pay for a membership.

Bright Future Ahead

While Boardman is concerned about all the government regulations, he has a positive outlook on the industry. His operation is located in the heart of the corn belt in an irrigated area so even with the drought this past year, they sprayed more acres with fungicides.

In his new role as Vice President, Boardman plans to promote NAAA and help out where needed. The unique perspective he feels he brings to the board is, "I can understand all ends of the spectrum from the small guy to the larger operators and some of the struggles they go through along the way. You're going to learn a lot of things the hard way and you're going to work hard, but it's a very gratifying occupation." ■

Colleen Isaacson is a freelance writer and graphic designer based in Boise, Idaho. Her father Leif Isaacson, of Desert Air Ag in Terreton, Idaho, served as NAAA's 2012 Vice President.

DAVIDSON A ROCK-SOLID CHOICE AS NAAA'S SECRETARY

DOUG DAVIDSON
NAAA Secretary
Davidson Solid Rock Insurance
Clinton, Ark.

Doug Davidson grew up in the St. Louis area and always wanted to fly. He attended Parks College and graduated in 1982 with the goal of finding a flying job. With all the Vietnam veterans flooding the job market he was unable to find work. A friend informed him of an opening for an insurance position. The selling point was that they had an airplane you could fly any time you wanted. Davidson said, "Give me the number!"

He went to work for an underwriting company and insured aircraft and aviation type risks. They issued him a plane, assigned him a territory of five states and he wrote as many policies as he could. He did this until 1995 when the company was sold and the opportunity developed for him to open his own business. Based in Clinton, Ark., he started Davidson Solid Rock Insurance. He is licensed in more than 40 states and specializes in aviation. While agricultural aviation is the majority of his business, he also insures corporate, private, business and pleasure aircraft and other aviation-related segments.

Davidson has always been a big supporter of NAAA. He served on the NAAREF Board for six years during the formative years of the PAASS Program and says it has been rewarding watching the program grow. He also has a passion for working with new pilots in the industry and feels the Com*paass* Rose program is a valuable resource. "NAAA has been a good association for us. It keeps us in touch with our operators and issues that involve them on a national basis," he said.

Davidson also serves on the insurance and convention committees. "We derive a lot of our funding that comes into the NAAA through that convention so we want to make sure it's well attended and in a place where people want to go to get more participation." As NAAA Secretary, he says he is looking forward to working more closely with the other officers and helping out however he can.

Glass Half Full

An optimist at heart, Davidson feels strongly that agriculture is a growing industry even in today's economy. "I tell people all the time that of all the areas we deal with in aviation, the bright spot is, if not for the whole economy, agriculture. In the ag aviation portion of our business, our aircraft values are holding better than any other segment of aviation. We're hiring pilots as opposed to corporate America which is laying off pilots."

Another trend Davidson has noticed is that "pilots are working year-round to subsidize their incomes and now you see airplanes that are going all over the country. We have a lot of guys from Arkansas that go up to the Midwest and fly corn in the summer, and the Midwest has come to depend on operators coming in from other states to help with the rush."

Davidson hates to relax, so lucky for him, his business is busy all year round. When he does decide to take a timeout he enjoys hunting, fishing, riding his Harley or taking road trips with his wife and four children. –*C.I.* ■

BRENDA WATTS, AN ELECTRIFYING CHOICE AS NAAA'S TREASURER

BRENDA WATTS
NAAA Treasurer

K & P Flying Service
Watson, Ark.

Born and raised in Arkansas, Brenda Watts has evolved herself into a successful, business savvy entrepreneur. She started doing bookkeeping for K & P Flying Service where her son was the pilot. When her son left the operation she decided to operate the business on her own. She sold one of the two Air Tractors and dove into the world of agricultural aviation. She has operated the business in Watson, Ark., for the last 15 years. "I do everything at that flying service except for fly. I'm a pilot, but I don't fly that Air Tractor," Watts said.

For Watts, her work is her hobby but she also loves to play golf, entertain guests, fish, cook and do yard work. After a busy day she enjoys coming home to her wonderful husband Rick Watts of 11 years and their four dachshunds.

Paving the Way

As an operator she has always been actively involved in her state association, the Arkansas Agricultural Aviation Association, as well as NAAA. "They spend many hours trying to work for us. To make sure we can be a viable industry, because with the EPA, regulations, and MET towers we have now, it's overwhelming how many hurdles we have to cross to be able to succeed," Watts said. "We are in a high risk, high stress occupation and the NAAA works to protect us in so many ways."

Watts stresses the importance of the programs and affiliates of NAAA, noting that since the introduction of NAAREF's PAASS Program 15 years ago the industry's accident rates have dropped more than 20 percent per 100,000 hours flown. She is also a supporter of the WNAAA and the Athena Project, a support program for spouses and women working in the industry, and wishes more women would participate so they could better "understand how much stress these pilots go through. They are laser focused and sometimes it's easier to shut down than have a conversation."

Watts' tenacity does not go unnoticed by her NAAA colleagues who refer to her as "Mighty Mouse." Years ago, Mark Hartz, a fellow Arkansan, asked Watts if she would be interested in serving on Arkansas AAA's board. Her response: "Those guys are not gonna want a woman doing this." Hartz replied, "If they don't, then they need to step up to the plate." Watts took those words to heart. In fact, she just completed a two-year term as Arkansas' president. When Hartz became NAAA's 2012 President, he named Watts chairperson of the Museum Committee.

The job of recruiting NAAA's 2013 officer team was assigned to 2011 President Rick Richter. He approached Watts as chairman of NAAA's Nominating Committee and made a straightforward pitch: "You know what you're doing, you've proven yourself and you need to do this."

Watts has stepped up to be the 2013 Treasurer and also holds the distinction of beingthe first woman officer to serve on the NAAA Board. As significant a feat as that is, she thinks of herself as one of the guys.

Teamwork

Watts has immense pride in the fact that she knows what she's doing when it comes to her operation. She can run the office, load the plane, do the paperwork and even attends Pratt & Whitney classes to learn how the engines operate.

With all that she does, she knows she couldn't do it without her team. That team includes Don Glasscock, her pilot of 10 years, and ground crewman Jim Silcox, as well as Hector Rodriguez who works part-time on the ground crew. She understands how hard they work, and she cooks for them everyday to show her appreciation. Watts is also indebted to her mechanic, Deloyd Rankin of Dumas Aviation Maintenance, who makes sure her AT-602 stays up and running. The other part of her team is her customers. "I take care of my farmers and they take care of me," Watts said. *–C.I.*

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2013

WNAAA OFFICER SPOTLIGHT

By Colleen Isaacson
Contributing Writer

AIR JORDEN LEADS TEAM WNAAA IN 2013

Growing up in the agricultural aviation industry I'm always astounded by the camaraderie of the individuals that make up this tight-knit group. Whether it be the pilots, their families, the operators or allied industries everyone comes together with one goal in mind: to sustain the future of their industry. The 2013 officers of the WNAAA each bring their own unique styles to the table but all share the qualities of being professional, business-minded women who are willing to work hard and are eager to help, learn and share ideas.

In an often-stressful industry these women all have several things on their plate and manage to do them with class, grace, and find laughs along the way. Their influential nature rubs off on their peers, families and even pets. One quality that stood out to me was their humble nature as they would attribute their successes to others and timidly ask me to "make them look good" when I wrote the article. They certainly don't need my help to make them sound incredible; they do that all on their own.

The 2013 WNAAA officers are a group of dynamic women with a passion for spreading awareness about their industry and eager to take on any of the tasks that await them. This year's all-star lineup of officers is a winning combination.

Player: Dona Jorden

Current Position: WNAAA President

Previous Position: 2011 Secretary

Home Court: Lane Aviation Inc. in Rosenberg, Texas

Trivia: African Grey parrot named Tango accompanies her to work

The WNAAA is …: A great learning and networking tool

"Everyone should know about the industry that they work in. I think it's very important; it was for me, especially when I first started."
—WNAAA President Dona Jorden, on getting involved in the WNAAA

Dona Jorden is Ready to Go to Work

With virtually no experience in the industry Dona Jorden started out as a clerical worker for Lane Aviation in 1992 and over the last 20 years has built a solid reputation for getting things done and getting them done fast.

At Lane Aviation she has several responsibilities including completing work orders, handling customer service, dealing with service or warranty issues and anything that pops up in the interim. Unlike the seasonal nature of agriculture, Lane Aviation ships both nationally and internationally keeping her busy all year round. "Dona does her job in a professional manner and is an integral part of our organization," Grant Lane, Lane Aviation's owner, said.

When Dona first started her position it was not without its challenges, especially from her male counterparts who enjoyed a few pranks at her expense. Luckily for her, she has a great sense of humor and her days of being sent on a wild goose chase for "prop wash" or trying to figure out why anyone would want a "square tire" are in the past and only fueled her desire to work hard and figure things out. From that point forward she said, "I just kind of fell in love with what I do. It's never the same, it's always different and things change all the time."

She really shines when it comes to her customers and relationships with the operators. "I love my customers. They're all unique and they all have their own way of explaining things and I find that fascinating. They can look at one part and have 10 different explanations or names for it, so learning what each of those are from each customer has helped me a lot."

Not one to take all the credit, she attributes much of her success and attitude to Grant Lane, saying, "he really cares about getting the customer what they need and getting it to them quickly. He's instilled that in all of us … that the customer comes first." That same work ethic has even trickled down to her African Grey parrot named Tango who accompanies her to work every day with his favorite phrase "You wanna go to work? Ready to go to work?" What does Lane think of her "plus one"? He says, "I have one just like it!"

While Jorden seems to have things down to a science she can't stress enough the importance of learning and networking in the trade. "Everyone should know about the industry that they work in. I think it's very important; it was for me, especially when I first started. It was one of the things that interested me in the WNAAA because I could learn more and it helps you understand what's going on in the world, not just your business." The best part of being in the organization is "the information I've learned and understanding how much it takes to make things actually happen."

Dona Jorden with Grant Lane (left) and Mark Lane at Lane Aviation's booth at NAAA's 2012 Convention & Exposition.

Making things happen is exactly what she did for colleague Leslie Craft, this year's WNAAA Vice President. Craft shared that one summer an air conditioner part broke in 102-degree heat and it was Jorden's connection and relationship with another vendor on the West Coast that got her the part the next day. "Without that connection that would have never happened," Craft said.

For her upcoming year as WNAAA President, Jorden believes that since she works outside of the agricultural sector of the industry and works mostly with operators, that she can "bring a new perspective and look at things from a different angle than maybe some other people would inside the organization."

Kathy Diehl, whom Jorden is succeeding as WNAAA President, got to know her better when they served on the WNAAA's 2011 officer team together. "Dona is a good listener and has the ability to look at all sides of a discussion," Diehl said. "She weighs all options before voicing her opinions. She does what is best for the group and has no personal agenda."

Her employer agrees and feels that with her experience and leadership skills developed at Lane Aviation, "she can bring new light to the association with her ideas." Her unique viewpoint and get-it-done attitude will be a great addition this upcoming year. ■

Colleen Isaacson is a freelance writer and graphic designer based in Boise, Idaho.

2013 WNAAA OFFICER SPOTLIGHT

A WOMAN OF MANY CRAFTS

An entrepreneur at heart, Leslie Craft knows a thing or two about discipline and passion. The WNAAA's 2013 Vice President hails from an agricultural background and was raised on a local farm. Perhaps it was her upbringing that conditioned her to work hard and play hard, but she never expected to find what she calls a "nine to five" guy. That's why she and her husband Craig are a perfect fit—they both appreciate always having work. Together, they operate Craft Air Services and also have a business manufacturing seed drill repair kits for John Deere that they ship all over the world. When she's not helping out with those she continues to run her Meryl Norman cosmetics franchise that she has owned for the past 16 years.

The Crafts have three daughters and, like a lot of agricultural families, everyone pitches in. Their 14-year-old helps with filing and organization around the office, their five-year-old helps with stapling invoices and maps, while their newborn brings the smiles. When she's not staying busy with work Craft likes to spend it hanging out with her girls, painting with acrylics or listening to music. She also enjoys sailing and flying her 172.

Craft is very particular about what organizations she joins, saying, "I need something with a purpose and that can progress my life. You really get that from these women on the WNAAA. As a professional group they're all in it to help each other. It's great to see women uplifting other women and everybody wants you to be successful."

She is a strong supporter of the group and encourages women to join "so they can be around other women that have the same common goals and visions that they have, as well as the same struggles and obstacles in life. If you're in this industry you definitely need to be involved because you need to immerse yourself with those type of people because you can grow with them."

Player: Leslie Craft

Current Position: WNAAA Vice President

Previous Position: 2012 Secretary

Home Court: Craft Air Services, Hertford, N.C.

Trivia Answer: Leslie is a student pilot and already soloed her 172

The WNAAA is …: An avenue to merge the farming and non-farming communities

"It's so important to educate the community about the benefits of agricultural aviation. That's why I'm involved with the WNAAA."
—Leslie Craft

While the hard work never stresses Craft out, the outside regulators and people not in the farming community who don't understand the industry bring the most tension. "It's so important to educate the community about the benefits of agricultural aviation. That's why I'm involved with the organization," she said. "We're under the NAAA umbrella that protects us. They fight those regulations for us so we don't have to fight so hard. That's why it's important to be involved, raise money and support the organization."

Her goal continues to be merging the farming and non-farming communities together. This past season she was pleased to witness this integration to a certain degree. "It all came together for us this year because we had a huge problem with mosquitoes. Since the non-farming community had a need for insecticides, it was acceptable."

Craft served as WNAAA Secretary in 2012 and plans to bring her enthusiasm to the Board again this year. That same spirit fuels her ongoing quest to raise awareness of the benefits of agricultural aviation so the industry can continue to prosper. —*C.I.* ■

2013 WNAAA OFFICER SPOTLIGHT

MORSE'S CODE: PARTICIPATE ENTHUSIASTICALLY

Whether she's running a half-marathon, learning lines for the theater or going to school for a double major in accounting and finance, Erin Morse always accepts a challenge. Since getting started in the industry in 2003, she and her husband Gavin, who currently flies for B & R Aerial Crop Care, have been actively involved in their state, regional and national agricultural aviation associations. In fact, Morse just finished a presentation for the Athena Project at the WNAAA Convention and PNWAAA fall board meeting about how to deal with stress in a pressure-filled environment. Although she has many tips to ward off tension she likes to create a little time to spend with Gavin on a picnic or a quick trip down to the lake to relax.

Morse's passion for the WNAAA shows through when she speaks. She feels the best part of the organization is "the level of professionalism, courtesy and respect that is given at the meetings. You have a room full of go-getters and people who are there to make it happen. It's a very warm and welcoming place where women are able to be powerful, strong, and get things done, but also be kind and nurturing. I love that it is able to take all of the best aspects of what it is to be a woman and enhance those."

While she says the main focus for the WNAAA is education, other benefits include networking and one-on-one time with other women. "Simply participating and talking with the women gives you the tools and resources of how to talk to people in your community about agricultural aviation in a positive manner," Morse said.

Player: Erin Morse

Current Position: WNAAA Secretary

Previous Position: 2012 Treasurer

Home Court: Connell, Wash.

Trivia Answer: Celebrates a new holiday called "Thanksmas"

The WNAAA is …: All about promoting education to the public and members

"You have a room full of go-getters and people who are there to make it happen. It's a very warm and welcoming place where women are able to be powerful, strong, and get things done, but also be kind and nurturing."

—Erin Morse, on the WNAAA's meetings

While she values what you can get from the organization just by attending, she places equal value on the importance of paying dues and financially supporting the organization so it can continue to be a viable resource for professionals in the industry.

For anyone contemplating volunteering their time on the WNAAA Board, Morse says, "Do it! It allows a better understanding of what would be beneficial to any person affiliated with an agricultural aviation business so we can

provide education or opportunities to get them better resources. It's important that everyone gets involved because what's impactful or important for one state might be different for someone from another state and we could miss something."

She feels the strongest quality she can bring to the board is fresh ideas—and new ideas are something she has experience with. What started out as a get-together to spend time with their friends around the holidays between Thanksgiving and Christmas was quickly dubbed a holiday called "Thanksmas." This year's Thanksmas agenda will include a feast and a "Rocket-off" competition.

Her goal as secretary this year is to continue to focus on the WNAAA mission by promoting education. In addition, Morse would like "to create and mold new and existing programs to make them more effective and find new avenues to grow the organization so it continues to be a thriving tool for our industry." —*C.I.* ■

2013 WNAAA OFFICER SPOTLIGHT

NEW WNAAA TREASURER LEARNING AS SHE GROWS

Spending summers working on her family's ranch in Idaho, Kelli Bartholomew is a perfect fit for the agricultural aviation industry. Her husband, Mike Bartholomew of Bart's Flying Service, was born into the business and has been around aviation his entire life. Kelli moved to Iowa in 2007. After being there two weeks, Mike gave her a brief "sink or swim" instruction on how to operate a loading rig and she was off and running.

Kelli and Mike, like many other people in the industry, have a lot of irons in the fire. They operate a limo business, firewood business, part-time tree trimming and cutting business, manage two hog sites and whatever catastrophes happen in between, all while raising two children. When she finds some downtime, she enjoys visiting her family, antique shopping or getting lost in a good book. Like any country girl at heart she also enjoys riding horses, snowmobiling, four-wheeling and trap shooting.

Since 2007 she's immersed herself in the organizations that support her family's livelihood. She sits on both the state and national boards and explains, "I do it to understand the business. Since I really didn't know anything about it and was kind of thrown into it, I like learning the industry and being able to support my husband and in-laws." Bartholomew acknowledged that "it took a couple of years to figure out and respect what they go through." Now, she helps deal with the stress of a busy season by staying positive, joking with the crew and picking up extra chores so that her family can focus on flying and getting rest when they can.

"This is really a great industry, and agriculture as a whole wouldn't be the same without agricultural aviation and what we do," said Bartholomew. "Being able to promote the industry and educate people are some things that you get to do by being involved in the WNAAA."

Player: Kelli Bartholomew

Current Position: WNAAA Treasurer

Previous Position: Iowa AAA's WNAAA Board Representative

Home Court: Bart's Flying , Alta, Iowa

Trivia Answer: Kelli thoroughly enjoys running a loading rig

The WNAAA is …: All about learning the industry and building friendships

Other benefits of membership include meeting people from all around the U.S. and the sisterhood the ladies share within the group. "Because I'm as busy as I am, my board meetings get to be my 'vacation' and my social time. It's really rewarding talking with other people about how they run their business."

Bartholomew is looking forward to being a presenter for the Athena Project and hopes to gain a deeper understanding of how the WNAAA works. Even after five years of serving on the board, she admits, "It's not something you can just jump into and in 1-2-3 years have it figured out," so she plans on bringing her open-mindedness and learn all that she can. —*C.I.* ■

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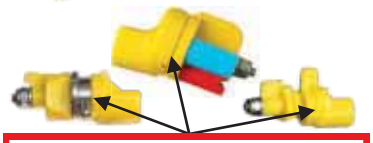

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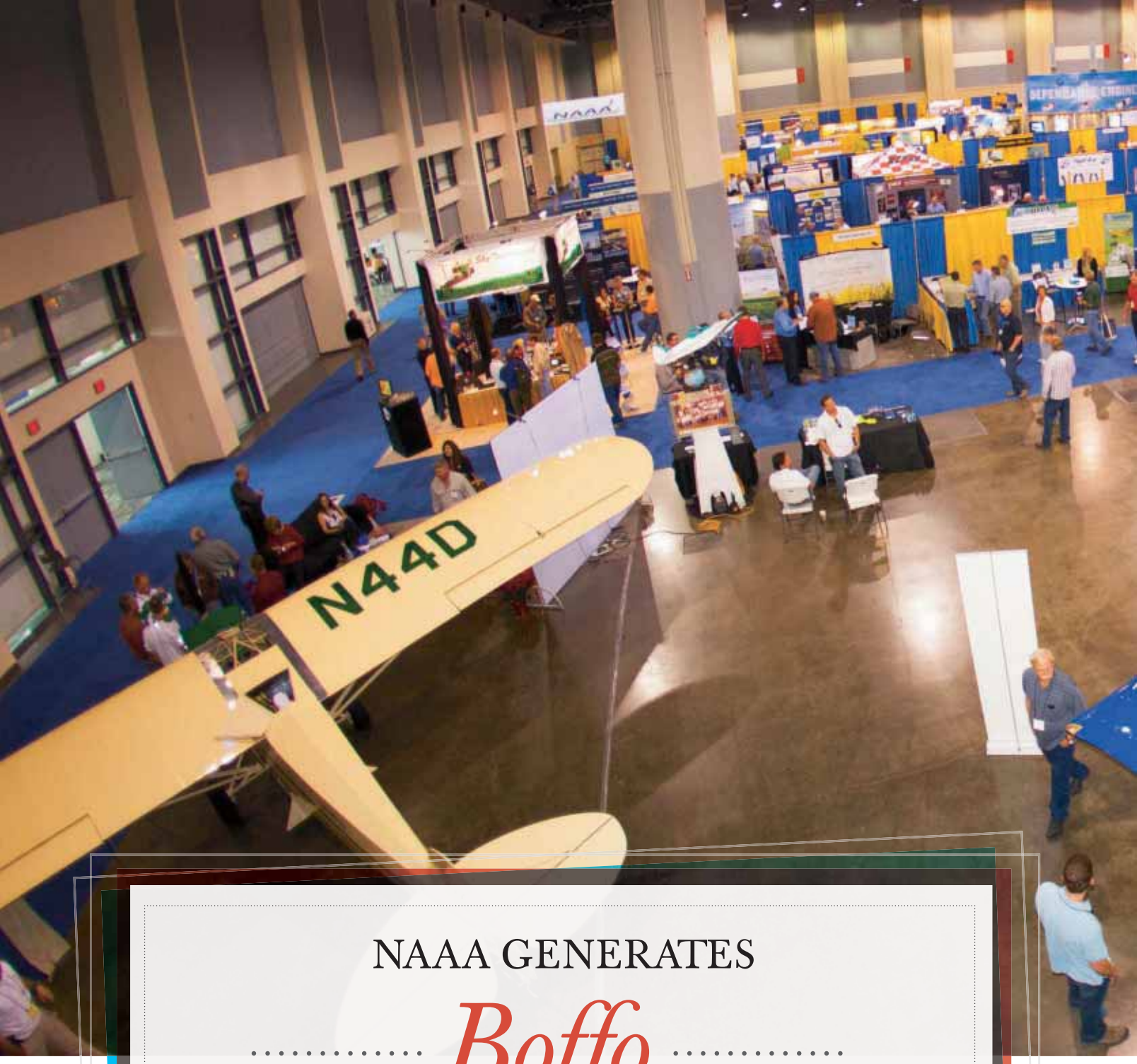


NAAA GENERATES

Boffo Box Office Numbers

for the 2012 Savannah Convention

WITH THE 46TH ANNUAL CONVENTION & EXPOSITION

in the books, NAAA has another blockbuster on its hands. *Savannah, The Sequel,* the follow-up to NAAA's hit 2010 Savannah Convention, delivered boffo box office numbers during its Dec. 3–6 run, breaking records for the third consecutive year.

Audiences agree that NAAA continues to "chart a confident course" for its conventions, as numbers in nearly every category increased, including:

- **Attendance:** Attendance was better than it's been for any NAAA convention since 1998, with 1,760 attendees participating in the four-day ag aviation extravaganza. That was slightly more

than the 1,737 attendees who attended the 2011 Convention in Las Vegas but a 14-year high nevertheless.

- **Exhibitors:** The number of exhibitors nearly equaled the all-time high set last year with 155 exhibitors in Las Vegas. This year, NAAA had 152 exhibitors, including 10 airplanes and three helicopters, the largest contingent of aircraft seen in years at the trade show. Exhibiting aircraft included the recently FAA-certified Thrush 510G, featuring the new GE H80 turboprop engine, and the Thrush 510P; an AT-502B, AT-602 and AT-802 from Air Tractor; an AT-802F "Fire Boss" Air Tanker; two Bell 47 helicopters from Scott's – Bell 47 Inc.; and from Chatham County (Ga.) Mosquito Control, an AT-402A and MD 500E helicopter. The NAAA Trade Show marked the U.S. debut of the new PA-25 p3, an entry-level agricultural aircraft from Argentina-based Laviasa that seeks to make inroads in the U.S. ag aviation marketplace by filling a lower-cost niche. Attendees also got to marvel at a J3C-65 Piper Cub manufactured in 1946 and meticulously rebuilt by Dusty Dowd of Syracuse Flying Service Inc. Dowd flew from Syracuse, Kan., to Savannah, in the Cub to share a piece of ag aviation history with attendees.

- **Hotel Space:** NAAA eclipsed last year's record hotel allotment. Attendees reserved a total of 3,980 room nights in Las Vegas. This year, attendees reserved 4,108 room nights, boosting its occupancy record by 3.2 percent.

- **Auction Proceeds:** By raising nearly $370,000 at the Live Auction and close to $12,000 at the Silent Auction, NAAA and WNAAA bested last year's combined intake of $380,000, which was second only to the $460,000 in auction proceeds raised in 2010. Nearly $200,000 of this year's amount came from Al and Mike Schiffer of Al's Aerial Spraying in Ovid, Mich., and Jon Pew of Sarita Aerial Contractors in Coolidge, Ariz., who were the top bidders for Pratt & Whitney Canada's certificates of credit for OEM parts and maintenance services for a large and small PT6A AG engine, respectively. NAAA would like to thank Pratt & Whitney Canada once again for this unprecedented contribution and for the incredible support the company has shown NAAA and the industry over the years. Special thanks also go to Tulsa Aircraft Engines and all the other generous contributors to another successful auction.

Here are additional highlights from NAAA's 2012 Convention from a week that had plenty of them.

Kickoff Breakfast

The incomparable Story Musgrave got the 2012 Convention off to a rousing start by sharing stories from his remarkable life. The astronaut with agricultural roots recounted the path that led him from the family dairy farm to the final frontier as an astronaut with NASA. Musgrave was always mechanically inclined and says, "By 12 or 13, I learned how to get the job done"—regardless of what the job happened to be.

By 17 Musgrave was working as an aircraft electrician and engine mechanic in the Marines. He learned to fly with the Marines, and in the 55 years since has accumulated 18,000 hours in more than 160 aircraft. His interest in fixing things extended to people, so Musgrave entered clinical medicine and became a surgeon. It was all the same concept to him. "You fix farm equipment, you fix airplanes, you fix broken people," Musgrave said. That prompted him to become an astronaut. He started working on NASA's Hubble Space Telescope in 1975, spent 18 years designing the tools to fix it and served as the lead spacewalker on the Hubble Telescope repair mission.

Retired astronaut Story Musgrave shares stories from an astronautical career steeped in agricultural roots at NAAA's Kickoff Breakfast.

Musgrave said all of those opportunities became possible by taking "one little step at a time" and pursuing his passions. He advised NAAA's attendees to get in the game, focus on what they are good at and to follow their dreams, while keeping their feet planted firmly on the ground.

NAAA/BASF Agricultural Aviation Scholarship

In addition to Story Musgrave's address, BASF's Gary Fellows announced the recipients of the 2012 Agricultural Aviation Scholarship at the Kickoff Breakfast. NAAA and BASF sponsor the three-year-old scholarship program together. NAAA President Mark Hartz presented Justin Mook with a check for $5,000 and Kippy Foltyn received a $2,500 scholarship. Mook hails from Wiggins, Colo., and Foltyn lives in Lansford, N.D. Both aspiring ag pilots will use the scholarship money to further their flight training. To be eligible, applicants have to be sponsored by an NAAA operator. Mook was sponsored by 2012 NAAA Treasurer Kyle Scott of Scott Aviation Inc. in Fort Morgan, Colo. Brian Sturm of Pioneer AgViation Inc. in Minot, N.D., sponsored Foltyn.

NAAA 2012 President Mark Hartz and Executive Director Andrew Moore with 2012 NAAA/BASF Agricultural Aviation Scholarship recipients Justin Mook (center left) and Kippy Foltyn (far right).

Fire Boss Aerial Firefighting/Water Drop Demonstration

Fire Boss brought some extra buzz to the opening day of the convention by putting on a live demonstration along the Savannah River. An AT-802F "Fire Boss" Air Tanker performed a series of water scoops and drops that drew crowds along both sides of the Savannah River, but that may not have even been the most exciting part of Fire Boss's day. It was an open question as to whether the Air Tanker would be able to fit and pivot through the convention center's new hangar doors. It did!

After entertaining convention goers with a series of water drops on the first day of the convention, workers negotiated the AT-802F "Fire Boss" Air Tanker through the Savannah International Trade and Convention Center's new hangar doors for display at the NAAA Trade Show.

ASABE/NAAA Technical Session

After the Kickoff Breakfast, researchers from the Aerial Applications Committee of the American Society of Agricultural and Biological Engineers (ASABE) kick-started NAAA's educational programming as they customarily do, but this year marked a change in the how the ASABE/NAAA Technical Session was structured. See pg. 48 for a complete recap of the proceedings.

FAA/Security Session

The FAA/Security Session panel consisted of Carl Johnson, FAA, AFS-802, Acting Assistant Deputy Manager of the General Aviation & Commercial Division; Michael Schwartz, FAA, Aviation Safety Inspector, Commercial Operations Branch; Zach Carder, TSA, Section Chief Airspace Coordination; and Brad Snider, FBI, Special Agent, Savannah International Airport Liaison. The four representatives appear from left to right in the adjacent photo.

After introductions from NAAA Safety/Federal Aviation Regulations Committee Chairman Ron Cline, the question and answer segment commenced with questions for the FAA's Johnson about some potential operators being told they were unable to get a part 137 certificate due to personnel shortages in certain areas. He explained in regions where personnel were short, a waiting list is established.

At left, Carl Johnson, Acting FAA Assistant Deputy Manager of the General Aviation and Commercial Division, responds to a question while FAA Aviation Safety Inspector Michael Schwartz looks on. At right, Perry Hofer of Doland Aerial Spraying in Doland, S.D., raises the issue of marking towers under 200 feet to enhance pilot safety with the panel.

Each applicant is placed in the queue and the application is processed as soon as possible in the order they were received.

Special Agent Snider discussed the matter of shooting at aircraft. He asked the audience how many knew they had been shot at and approximately 15 people held up their hands. Snider reiterated it is a federal offense and the FBI should be notified, but he also suggested reporting it to local law enforcement. In addition, attendees were encouraged to report any instances of a laser being pointed at an aircraft.

Zach Carder described the operation of the TSA's general aviation security hotline (1-866-GA SECURE) and how reports are handled when someone calls in a report to them. The report made may be of suspicious activity or something more serious such as an incident in progress. Local law enforcement should immediately be notified if there is a safety threat.

The never-ending problem of defining congested areas was brought up to Johnson, who said congested areas are determined by case law. He shocked many in the group by saying there is case law that found that one house or one automobile can be defined as a congested area. NAAA will be investigating these cases.

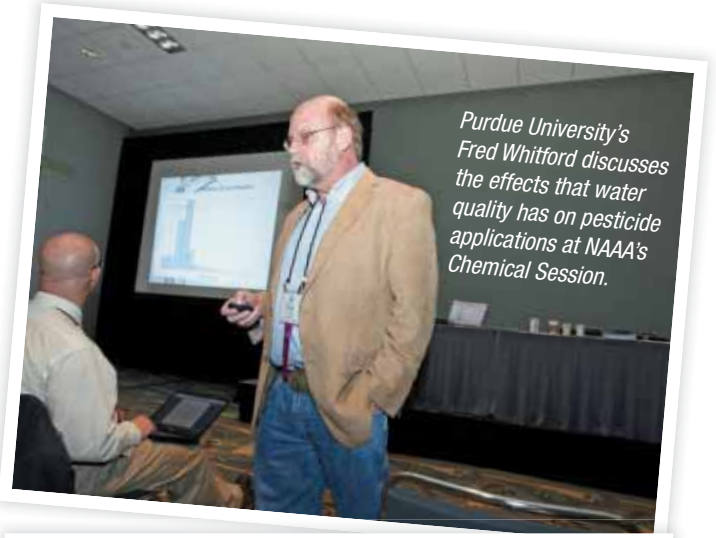
Johnson was again asked to clarify the issue of OpSpecs for part 137 operators. He turned the subject over to Mike Schwartz, who is the contact between the FAA and NAAA. He firmly stated there are no OpSpecs for 137 and the information requested by the FSDOs is intended to only be used to enter information into FAA's WebOPSS database. Schwartz is currently writing clarification to the guidance for inspectors which should clarify the issue for them.

Individuals in the audience asked for clarification on several issues including whose 137 certificate is being "operated under" when one operator helps another. The FAA position seems to be that the operators should make a decision on how they are operating, but all paperwork such as carrying of the certificate copy should support this decision. The pilot must produce an acceptable knowledge and skills endorsement given by the operator or his designated supervisor of the company whose 137 certificate is being used.

Carder explained the process by which Temporary Flight Restrictions (TFRs) are created and the considerations of safety to the protected area. One of the most troubling is the presidential TFRs administered by the U.S. Secret Service. The protection detail is tasked with providing safety to the president and they are not willing to reduce his security. Methods for coexisting while maintaining security are being explored.

Johnson closed the program by reminding everyone receiving a request to complete the general aviation activity survey to do so. This annual survey is the only method used by the industry to track aircraft numbers, hours flown and activity. He also reminded attendees that an online site for reporting laser strikes to aircraft is available through the FAA's website at *www.faa.gov/aircraft/safety/report/laserinfo/*.

Chemical Session



Purdue University's Fred Whitford discusses the effects that water quality has on pesticide applications at NAAA's Chemical Session.

At the Chemical Session, Dr. Fred Whitford from the Purdue University Pesticide Program gave an excellent presentation on water quality and its effect on pesticide applications. The quality of water used in a pesticide application makes a difference on the performance of those pesticides for controlling the targeted pests. Two important characteristics to be concerned about for your water source are pH and hardness. The wrong pH will break down chemicals, while hardness will bind them up. The performance of products is impacted by both pH and hardness.

pH is a measurement of how acidic or basic something is. On the pH scale, 7 is neutral, with numbers less than 7 being acidic and numbers greater than 7 being basic. For most pesticides, the optimum pH is slightly acidic. Some products, notably the SU herbicides, need a pH above 7. It is important to know the pH of the water you are using for your pesticide applications. The pH affects how quickly the pesticide breaks down once it is mixed into the spray solution. As an example, one particular fungicide had a half-life of 10 hours in a solution with a pH of 5; at a pH of 7 that half-life was reduced to 3 hours, and at a pH of 9 the half-life was just 2 minutes.

A simple pH test kit consisting of strips can be used to measure solution pH. A digital pH meter can also be used. The required pH for the products you are using may be found on the label, and Whitford would like to see manufacturers provide a chart that provides the optimum pH for all of their products. Certain statements on the label, such as "do not let spray sit overnight" or "apply same day prepared" are clues that the product will degrade and that you should be concerned about pH. The chemical itself has a pH that will impact the final pH of the spray solution, but to what extent varies from product to product. It is the final pH of the spray solution that matters, not the pH of the water alone. The pH can be adjusted using a buffering agent or acidifier, depending on what needs to be done to the spray solution.

Water hardness refers to the amount of various compounds, including calcium, magnesium and iron dissolved within the water. All of these compounds are positively charged, while glyphosate is negatively charged. This means the glyphosate will bind with these minerals, reducing its effectiveness. As a general rule, you need a water hardness of less than 200 for pesticide applications. Ammonium Sulfate (AMS) can be added to spray solution to bind with the calcium and magnesium, preventing them from binding with the glyphosate molecules.

Water hardness and pH are not related to each other, so just because one of them is acceptable do not assume the other is too. Also, you cannot fix one of them and assume you fixed the other. Whitford said you need to measure and potentially adjust for both pH and hardness. Research data has shown that the order of water conditioning is not important, but Whitford still recommends adding the conditioner first. Conditioning the water does not change the hardness of the water because it does not remove the minerals, it just binds them up and prevents them from being an issue. If you test the water for hardness after conditioning it, it will still register as being hard because the minerals are still there; they are just incapable of causing an issue. There are commercial products available that fix both pH problems and water hardness at the same time.

Whitford concluded by recommending that applicators pay attention to pH and water hardness, especially for products with low use rates, applications where the lower end of a use rate range is used, tough to control pests, and where you need residual activity. Considering all of the other costs associated with making pesticide applications, the test equipment used to test pH and hardness is well worth the cost. Talk to manufacturers about their products to determine required pH and hardness if you can't find information on label. The Purdue Pesticide Program has a publication with more information on this topic, which can be viewed at *www.ppp.purdue.edu/Pubs/PPP-86.pdf* .

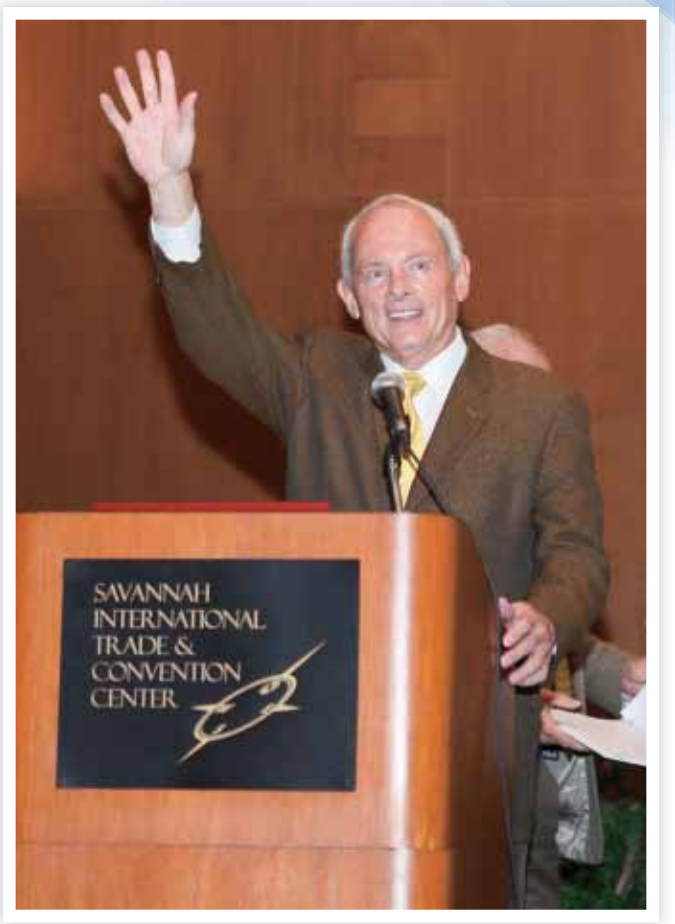
NPDES PGP General Session Update Advises Risk Avoidance

The General Session on the second day of the convention is NAAA's signature educational event, and this year's version, a double-dose of legal and technical advice from some of America's leading legal and environmental regulation authorities, did not disappoint.

First, in a brief update marking the one-year anniversary of the NPDES pesticide general permits, aerial applicators were advised to stay on their toes with regard to differing state requirements and potential legal risks for the future. John Thorne, senior government affairs counsel for Bergeson & Campbell PC, spoke to the developments and changes since the permits' enactment on Oct. 31, 2011, and provided a comparison between state requirements as well as legislative efforts being pursued to overturn the duplicative, burdensome requirements.

Thorne stated aerial applicators are automatically covered by the NPDES PGP so long as they are not decision-makers, and therefore have less stringent requirements. However, he cautioned that if they venture into decision making for their clients, they should be prepared to take on and comply with the substantially greater PGP requirements for decision-makers.

He spoke to state concerns with the permits and highlighted several states' decisions to declare pest emergencies to bypass immediate PGP approval to avoid application delays over the summer months to battle potentially lethal West Nile virus (WNV) and Eastern equine encephalitis (EEE). This resulted in at least one environmental activist group in Massachusetts filing a petition with EPA's Office of Inspector General against a public health agency for making an emergency application to combat WNV carrying mosquitoes, allowed under the permit, prior to filing and being granted an NPDES PGP. Thorne indicated that in 2013 and beyond these types of actions and citizen action suits allowed under the Clean Water Act may become more commonplace in regards to the NPDES PGP. He also stressed the Endangered Species Act (ESA) requirements in EPA's permit that applies in six states and the failed activist petition in Oregon regarding the development of new rules to better address pesticide threats to ESA-protected species that may now lead it and many other states to turn to litigation.



NAAA consultant John Thorne informs attendees about the latest twists and turns in the NPDES saga shortly after the one-year anniversary of when the NPDES pesticide general permit requirements were enacted.

Thorne also warned of a rulemaking forthcoming in 2013 that would expand the definition of "waters of the U.S.," and advised aerial applicators to be acutely aware of areas treated and the very real possibility of the scope of the PGP being expanded with the new definition. Additionally, he stated that legislative efforts to overturn the 6th Circuit's decision thus far had been unsuccessful. Despite legislation passed in a bipartisan fashion out of the House and through the Senate Ag Committee, holds by Sens. Boxer (D-CA) and Cardin (D-MD) halted the progression, leaving NAAA and its allies to likely start over again with their efforts in the 113th Congress.

Thorne urged NAAA members to continue to stay abreast of NPDES updates via the NAAA website, which provides a litany of information on NPDES permits, including a checklist of compliance activities and sample contract language.

Mock Trial: Aerial Application on Trial!

The second half of the General Session featured NAAA's eagerly anticipated mock trial. Audience members were riveted by Geff Anderson and Raven Atchison's gripping reenactment of a case the law firm of Anderson, Riddle and Kuehler LLP had defended three years earlier on an NAAA member's behalf. Unlike other mock trials, Anderson said the facts in this case were nearly identical to the actual proceedings in which an aerial applicator had been accused of drifting 2,4-D onto a nearby cotton farm and wiping out the majority of the crop.

Another unique aspect was the fact that three mock juries deliberated on the evidence: a jury of aerial application constituents who witnessed the case live at the General Session, and two mock juries that had heard the case a week earlier in a mock courtrooms assembled in Texas.

The case pitted Accurate Spraying Inc. against a cotton farmer who was forced into bankruptcy because of 2,4-D damage to his cotton fields. The presence of 2,4-D on the cotton was indisputable. The only real, undecided matter was the source of the contamination. The farmer suspected Accurate Spraying because two of its pilots had applied 2,4-D to 2,200 acres of another client's fields a mile and a half from the farmer's dryland and irrigated cotton fields. The farmer experienced $693,885 in total losses to his irrigated cotton and $99,894 in total dryland cotton losses, resulting in a combined loss of $788,184.

The applicator's records did not provide the exact time when two of its aircraft made the application. Instead, the pilots' written records indicated that the application was completed at two different times of the morning. One pilot wrote down 6:55 a.m. as the end time and the other one had the time completed as 9:30 a.m. In either instance, the wind that morning would have been blowing away from the cotton fields.

To compound matters, there was a discrepancy between the pilots' GPS records and their written reports, resulting in another conflicting point of data between the first and second pilots' application recordkeeping. The timestamp from the pilots' GPS systems stated that they started the 2,4-D application at roughly 4:24 p.m., when the wind would have been blowing at 22 mph directly toward the cotton farm. Anderson, who played the part of the plaintiff's attorney, made the point repeatedly that "the eye in the sky don't lie" to argue that the GPS system's sequence of events trumps the pilots' conflicting written accounts. Accurate Spraying's owner, played by NAAREF

Plaintiffs' attorney Geff Anderson (left) questions Mary Beth Schwaegel, playing the role of plaintiff John Smith, about the losses the Smith family farm suffered because of 2,4-D damage to their cotton crop while the judge, defense team (at left) and prosecution's witness (far right) observe the proceedings. "My dad wanted a boy," Schwaegel quipped when asked about her "funny" name.

President Rod Thomas, stated the timestamp on the GPS was wrong because the clock on the GPS system had been set incorrectly.

Another key exhibit was a map showing the distance between the fields Accurate Spraying treated and the cotton farm, as well as the dryland and irrigated areas that had been damaged by 2,4-D. A fairly sizeable tract of dryland cotton that had not been damaged was located in between the fields Accurate Spraying treated and the damaged cotton acres.

Jurors were asked to consider three questions: (1) Was Accurate Spraying negligent? (2) what was the loss? and (3) was Accurate Spraying grossly negligent? The prerecorded jury deliberations ran counter to the determination of the in-person mock jury at the General Session, which found for the defendant. Two different mock juries in the prerecorded segments found the aerial applicator not just negligent but grossly negligent, verdicts that subjected the applicator to punitive damages. Both juries awarded the actual damage amount the plaintiff was seeking, and they both awarded punitive damages. Jury No. 1 awarded a total of $3.2 million for punitive damages, and Jury No. 2 awarded $2 million for punitive damages.

The damning evidence in the eyes of the non-aerial-application mock juries was sloppy recordkeeping that created the appearance of unprofessional conduct on the part of the applicator. In the real-life case upon which the mock trial was based, the aerial applicator was exonerated, and a key piece of evidence was the undamaged dryland cotton between the two fields, a fact that bolstered the accounts of the pilots that they applied the 2,4-D in the morning.

NAAA thanks Geff Anderson and Raven Atchison for organizing the mock trial, Senior Litigation Consultant Alison K. Bennett for assembling the prerecorded mock juries, and all the participants, including Rod Thomas, Dennis Gardisser, Doug Davidson and Mary Beth Schwaegel, for their Tony Award worthy performances!

Helicopter Sessions

Two sessions of particular interest to helicopter operators and pilots occurred at the convention. The first was a company session by Scott's – Bell 47 Inc. The company now owns the Type Certificates for the popular Bell 47 helicopter which is a valuable part of the ag industry. Scott's is providing Original Equipment Manufacturer level customer support and services.

The company reported on two rather important events pertaining to the continued use of the Bell 47s. The first is the announcement that Scott's has contracted with IAC Ltd. to produce new composite main rotor blades instead of aluminum construction. The blades will have a custom designed airfoil which it said will give improved performance. As an added bonus, they hope the replacement life may be double the current 5,000-hour aluminum blade life expectancy.

An Isolair representative stands in front of an Isolair Bell 47 helicopter at the NAAA Trade Show.

Lycoming has announced they are going to discontinue support of the VO-435 which will lead to a shortage of parts for that engine. Solutions are currently being explored to obtain PMA parts to continue viability of this engine. Much effort is being expended to find engine conversions such as the Soloy to provide power for the 47s.

The second session of interest was the Helicopter Roundtable, again ably moderated by Jeff Reabe of Wisconsin-based Reabe Spraying Service Inc. Reabe explained he had realized the need for air conditioning in their Bell 47s during hot weather conditions. He believed one of their pilots became ill from flying with the doors removed, a situation that could be remedied by installation of an air conditioner. He searched around for an electrically powered air conditioner unit that was light enough to have a minimal effect on the load carrying capability and, at the same time, not overload the limits of the electrical system.

He settled on a portable pilot-installed Arctic Air unit manufactured for use in light aircraft. The unit weighs about 50 pounds and can be set to limit the electrical consumption to an acceptable level depending on the helicopter's electrical system. His company has operated these air conditioners for one season and the results have been exceptional.

After representatives from Scott's recapped their company session, the remainder of the session was spent discussing other topics including training new pilots for the aerial application industry. The various companies in attendance said they usually do the training within the company. This session is a valuable asset to the helicopter industry because of the wealth of knowledge shared between operators and pilots in attendance.

At left, Fran de Kock of Battleford's Airspray in Canada makes a point during the Thursday Compaass Rose session while a person looking for his first ag seat, right, listens intently.

Compaass Rose Sessions (Advice for New and/or Wannabe Ag Pilots)

Due to its popularity, NAAA schedules two Com*paass* Rose sessions at the beginning and end of each convention. Com*paass* Rose grew out of the PAASS Program and is led by PAASS presenters as a way to help educate new pilots entering the aerial application industry. Attendees run the gamut, ranging from people with no experience who want to learn about the industry to highly experienced pilots and operators who give of their time and experience to assist those wanting information.

The first Com*paass* Rose session took place Sunday, Dec. 2, along with the CD Aviation and Pratt & Whitney Canada engine seminars in what amounted to a soft opening for the convention. The second session was held Dec. 6. PAASS presenters Doug Thiel and Barry Joe Wilson led the Sunday session, while Gaylon Stamps and Leif Isaacson facilitated Thursday's information exchange. The two sessions collectively drew more than 120 attendees.

Before they opened the floor to questions from new pilots in the audience, Thiel and Wilson touched on some of the things an operator looks for in a potential pilot to start their session. A majority of the new pilots were willing to relocate to an area where they can find a job. Most were willing to take a job working on the ground if they felt it would lead into a flying job. New pilots were cautioned that being hired was many times a case of being in the right place at the right time. Therefore, they should not be discouraged easily.

The presenters asked attendees to think about how much money they expected to make as an ag pilot. Operators generally agreed that a job applicant who asks about money first is probably not the one they would hire. The ag pilot primarily must have the desire to fly and higher earnings will naturally come along with progression in experience.

Attitude, loyalty and a willingness to share in the stakes associated with hiring and training a new ag pilot were key themes that emerged in the Thursday Com*paass* Rose session. There's a lot of risk in taking on a green ag pilot, not to mention a considerable investment on the operator's part, but none of that seems to matter to some new ag pilots, an instructor in the audience lamented. Nowadays he estimates that approximately 80 percent of the students who go through his school and land a seat only stay with the operator who initially trained them long enough to land a "better" seat that pays a few cents more per acre. If that sounds like a criticism, it wasn't directed at anybody in the room. Far from being critical, all of the advice was offered in the spirit of counseling.

As one operator put it, having some "skin in the game" proves a prospective pilot is serious and willing to share in the risk, and there are many ways to do so. Examples given include signing a non-compete agreement and/or a contract committing to a certain number of years with the operator, paying for your own insurance, purchasing an aircraft of your own, and being willing to learn the ropes by working on the ground for a year or more before getting the chance to move into the cockpit.

Fare Thee Very Well, Friends

The 46th Annual NAAA Convention & Exposition culminated with the Farewell/Awards Banquet, a time when convention goers don't just say goodbye to each other but when the Association bids a fond farewell to the 2012 NAAA and WNAAA leadership teams for their service.

The recipients of the 2012 NAAA Awards were honored during the awards ceremony (see pg. 52), and NAAA welcomed a special guest, CropLife America (CLA) President & CEO Jay Vroom, who presented CLA's 2012 Agricultural Ambassador Award to NAAA Executive Director Andrew Moore. Vroom cited Moore's willingness to always be out front on the pertinent issues facing agriculture and his passionate belief in the agricultural aviation industry as two reasons for CLA's recognition. CLA, of course, is the national trade association that represents manufacturers and retailers of crop protection products.

Vroom has always been a close ally of NAAA's, and for that longstanding support and friendship, NAAA President Mark Hartz presented him with a Falcon Club pin, a marker that puts Vroom in exclusive company as a member of the NAAA Falcon Club. The Falcon Club pin was established in 1982 by NAAA President Roy Wood and is presented at the discretion of the current NAAA president to individuals who, through personal effort and dedication, have made substantial contributions to the agricultural aviation industry and its national association. In addition to Vroom, Hartz gave Falcon pins to six others (see box).

Near the conclusion of the banquet, President Hartz thanked his 2012 officer team and introduced Dana Ness of Ag Air Inc. in Rudyard, Mont., as the incoming NAAA President for 2013. President-Elect Ness introduced his officer team—Vice President Rick Boardman (Boardman Aerial Spraying Inc., Henderson, Neb.), Secretary Doug Davidson (Davidson Solid Rock Insurance, Clinton, Ark.) and Treasurer Brenda Watts (K & P Flying Service, Watson, Ark.).

NAAA President Mark Hartz fastens a Falcon Pin to CropLife America President & CEO Jay Vroom's lapel. Hartz awarded Vroom for his contributions to NAAA and the agricultural aviation industry.

2012 NAAA Falcon Club Members

KATHY DIEHL, WNAAA

DUSTY DOWD, Syracuse Flying Service, Syracuse, Kan.

LEIF ISAACSON, Desert Air Ag, Terreton, Idaho

JR REABE, Reabe Spraying Service, Plover, Wis.

KYLE SCOTT, Scott Aviation Inc., Fort Morgan, Colo.

GAYLON STAMPS, Stamps Spraying Service, Panhandle, Texas

JAY VROOM, CropLife America, Washington, D.C.

Andrew Moore (center) poses with Vroom and Hartz after receiving CropLife America's Agricultural Ambassador Award.

Next Up: A Return to Reno

The convention closed with an invitation from President Hartz to attend NAAA's 47th Annual Convention & Exposition Dec. 9–12, 2013, in Reno, Nev. Thank you to everyone who made this year's convention a huge success! We look forward to another great show next year, and already have some big news to report. The 50th anniversary of the PT6 engine coincides with NAAA's 2013 Convention, and to commemorate that milestone, Pratt & Whitney Canada has pledged to contribute a brand new PT6A-34AG engine to NAAA's Live Auction, just as it did in 2010! ■

Top row, from left to right: NAAA's Andrew Moore and Mark Hartz at AgAir Update's Hangar Party in Perry, Ga.; Dow AgroSciences and Thrush representatives (middle left) at their respective booths; middle row: Dusty Dowd and his meticulously rebuilt J3C-65 Piper Cub, which he flew from Syracuse, Kan., to Savannah; bottom row: Moore, Hartz and winning auction bidders Mike and Al Schiffer (back row, middle) with Pratt & Whitney Canada's team at the P&WC Reception that followed NAAA's Live Auction; Nicholas Kanellias discusses the merits of the PT6 engine with a couple at Pratt & Whitney Canada's booth.

Savor Savannah Again with NAAA's Commemorative Convention Photo CD!

A "best of" compilation featuring more than 400 photos from the 2012 NAAA Convention & Exposition is available for viewing and purchase at RandyThompsonPhotos.com. Prints can be purchased individually in 4 x 6 and 8 x 12 sizes from NAAA's official convention photographer, or you can get the entire collection on Randy Thompson's commemorative convention CD for just $40. In comparison, you can order two 4 x 6 prints for $12 or one 8 x 10 for $18. Additional charges apply for shipping & handling and sales tax. To order the CD, click on any of the thumbnail images in the NAAA 2012-Savannah photo gallery and add the photo CD to your shopping cart. You can pay online by credit card or mail a check to Randy Thompson, made payable to him. For more information, please visit www.randythompsonphotos.com and click on the event photography website link.

Top row, from left to right: Dona Jorden chats with Matt Crabbe at Lane Aviation's booth; U.S. and Canadian reps Randy and Beverly Berry with owner Francisco Pocaterra in front of the PA-25 p3 from Argentina-based Laviasa; middle row: Trevor and Kristen Edwards chat with a couple of military personnel; President Hartz speaks with an attendee at NAAA's membership-themed booth; bottom row: a caricaturist at the BASF booth smiles while preparing a novel keepsake for attendees; Joe Coppick visits with reps from AgSync at the NAAA Trade Show; Moore presents Hartz with a framed cover of Agricultural Aviation's January/February 2012 issue at the Farewell Banquet.

NAAA would like to thank the following sponsors for their generous support of NAAA's 2012 Convention & Exposition!

2012 CONVENTION SPONSOR	COMMITMENT
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syngenta	Live Auction Reception, General Session Co-Sponsor, Sunday and Monday Coffee Breaks
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SILVER SPONSORS ($3,000–$7,499)	
	General Session Co-Sponsor, Program Guide (Inside Ad)
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AgSync	Window Cling and Column Sign, On-Site Newsletter Exclusive, Registration Bag Insert
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DUPONT The miracles of science	Farewell/Awards Banquet
FMC	Convention Keepsake Pins
Pratt & Whitney Canada	Program Guide (Inside Ad)
Southeastern Aircraft Sales and Service	Window Clings, Beer in the Booth
PRECISION LABORATORIES 50th Anniversary 1962–2012	Program Guide (Inside Ad), Window Clings
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PHOENIX AVIATION MANAGERS, INC.	TBD
Queen Bee Air Specialties Inc.	Tuesday Coffee Breaks
Star-Flex	Convention Passport, Trade Show Benches
Starr Aviation	Window Clings
Transland	Wednesday Coffee Breaks
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AeroFlow Systems **AgriData Inc.** **Association of Montana Aerial Applicators** **Av-DEC Inc.**	**Sutton James Inc.** **Texas Agricultural Aviation Association** **Torell Aviation Insurance Agency Inc.** **Turbine Conversions**

SOLD!

NAAA and the WNAAA wish to thank everyone who made the 2012 Live Auction such a success, including Syngenta for sponsoring the reception, the individuals and organizations that donated goods and services to the Live & Silent Auctions and everyone who purchased an auction item. Thank you for your continued generosity! The combined auctions raised more than $380,000 for the two associations. ■

Before bidding begins on its R-1340 engine, Tulsa Aircraft Engine's Rex Vaughn acknowledges the passing of former owner Sam Thompson, who passed away unexpectedly in mid-November.

2012 NAAA/WNAAA LIVE AUCTION WINNERS

ITEM	DONATED BY	PURCHASER
40 AeroFlow Systems Standard Check Valves	AeroFlow Systems	John "Dusty" Dowd
$1,000 Certificate for any repair or purchase Ag-Nav product	Ag-Nav Inc.	Denver Craig
1 Guia Gold Complete – Helicopter or Fixed Wing	Ag-Nav Inc.	Brian Fisher
Lifetime Subscription to *AgAir Update*	AgAir Update	Leonard Felix
iPad 16 GB Wi-Fi	AgSync Inc.	Phyllis Jones
AT-802 Gatebox Fairing Kit	Air Tractor Inc.	John Pew
MVP 50-T Engine Instrument Display & Installation Kit	Air Tractor Inc.	Al & Mike Schiffer
AmSafe seatbelt airbag system for Air Tractor product line	AmSafe Inc.	Kyle Scott
AmSafe seatbelt airbag system for Thrush product line	AmSafe Inc.	Rick Boardman
To-scale Model AT-502	Bayer CropScience	Jane Bailey
Steiner Binoculars (8 x 42 Power)	Chemtura	Mary Boardman
$15,000 Repair, Maintenance, Overhaul Certificate	Covington Aircraft	Al & Mike Schiffer
50 CP-11TT Flat Fan Nozzles	CP® Distributor Family	Jeff Chorman
50 CP-11TT Flat Fan Nozzles Set #2	CP® Distributor Family	Terry Jordan/Doug Chanay
50 CP-06 Swivels	CP® Distributor Family	John Pew
Standard-size Pump Brake and 4-Blade Fan	Lane Aviation Inc.	Rock Boardman
Harold Miller Helmet	NAAA Museum Committee	Al & Mike Schiffer
Thrush Pedal Car	New Mexico Agricultural Aviation Association	David Songer
Small PT6 AG Engine Maintenance Credit	Contributed by Pratt & Whitney Canada	Al & Mike Schiffer
Large PT6 AG Engine Maintenance Credit	Contributed by Pratt & Whitney Canada	John Pew
Case of Wine	Professional Fiberglass Repair	Mary Boardman
Weath Aero Fan (F100AA Windmill Assembly)	Serv-Aero Engineering Inc.	Leonard Felix
Turbo Maxx Crossover Duct	Southwest Turbine	Tiger Jones
10% maintenance discount on maintenance up to $10,000	Standard Aero	Tiger Jones
Deluxe Custom Aviatior Helmet	Sygenta	Leonard Felix
P-51 WWII Airplane Ride	Tim McPherson, Tall Towers, ND	Kyle Scott
One Set of Custom Stainless Booms	Transland	Rick Boardman
R-1340 Engine, zero time since overhaul	Tulsa Aircraft Engines	Phyllis Jones
$2,500 Gift Certificate Toward Purchase Single Point Fuel System	Turbine Conversion Ltd.	Brandon Flexsenhar
One-day fly-in clinic—two Operation S.A.F.E. analysts come to location of purchaser's choice to analyze equipment patterns	WRK of Arkansas and Garrco Products Inc.	Jeff Chorman
NAAA President's Cap		Andrew Moore

THE SCIENTIFIC COMMUNITY AT WORK FOR AERIAL APPLICATION

A Summary of the 2012 ASABE/NAAA Technical Session

By Scott Bretthauer, Ph.D.
University of Illinois, Application Technology Extension Specialist

For the past several years the American Society of Agricultural and Biological Engineers (ASABE) Aerial Applications Committee has held its technical session at the NAAA Annual Convention. The goal of an ASABE Technical Session is to provide a forum for researchers who share a common professional interest to share the results of their latest research projects. In the past, the ASABE Technical Session has been exactly that: various researchers who work in the field of aerial application presenting the findings of their latest research projects.

In an effort to make the session more useful for aerial applicators and to better handle topics of greatest interest to NAAA members, the ASABE Technical Session at the 2012 NAAA Convention & Exposition was restructured. Instead of individual researchers presenting their work, ASABE Aerial Application Committee members chose topics in advance and assigned each topic to a speaker or speakers to address. Furthermore, the length of the session was cut in half, to two hours. For those unable to attend the ASABE Technical Session, here is a brief summary of each presentation. The full presentations are available online at http://apmru.usda.gov/aerial/.

Basics of AGDISP and How it Can Be Used in Your Operation

Presenters: *Clint Hoffmann, USDA-ARS; Steve Thompson, USDA-ARS*

AGDISP is a software program that models drift from pesticide applications based on information entered by the user. This information includes aircraft type, operating speed and height, swath width, weather information, and spray droplet size. Spray droplet size can either be entered directly, or can be referenced from various models, including the USDA-ARS nozzle models. The AGDISP output will provide the droplet size statistics, application efficiency (percentage of the spray that reached the target), percentage of spray lost in downwind deposition and the percentage of airborne spray.

AGDISP results were used to show how using drift reduction nozzles and a swath offset on the downwind edge pass can reduce drift. Two demonstrations of AGDISP were given, the first documenting how application height can affect drift. Two scenarios were run, the first at an 11-foot release height and the second at 20 feet. All other variables were kept the same. Flying at 11 feet instead of 20 feet reduced downwind deposition by 62 percent and airborne drift by 85 percent.

A second demonstration of AGDISP dealt with adjusting nozzle deflection angle, with all variables held constant except deflection angle, which was run at 30 degrees and 5 degrees. By increasing the angle of nozzle deflection from 5 degrees to 30 degrees, downwind deposition was reduced by 40 percent and airborne drift was reduced by 89 percent. This may seem

counter intuitive because we normally think of decreasing the angle of nozzle deflection as a means of increasing droplet size, which would seem to indicate we should see a decrease in drift, not an increase, as we go from a 30 to a 5 degree deflection. In fact, the volume median diameter (VMD) is larger for the 5 degree deflection than the 30 degree deflection. However, the 5-degree deflection has a wider relative span, which means even though the median droplet size is larger, there is a greater portion of the spray volume in smaller droplets with the 5-degree deflection than with the 30-degree deflection. This demonstration shows how useful AGDISP can be in terms of setting up and operating your aircraft, as well as highlighting that sometimes assumptions about nozzle setup and droplet size are incorrect. In many cases, increasing deflection angle will increase the risk of drift, not reduce it.

TAKEAWAY: AGDISP is a modeling software that uses aerial application setup data including aircraft setup, operating parameters and weather conditions to predict downwind drift. Aerial applicators are encouraged to use AGDISP to set up and operate their aircraft in a manner that maximizes efficacy and minimizes the risk of drift.

The Influence of Adjuvants on Aerial Spray Droplet Size

Presenter: *Robert Wolf, Wolf Consulting & Research LLC*

Bob Wolf summarized results from three separate studies that focused on determining the impact various adjuvants have on spray droplet size when used for aerial applications. The first project was a field study that took place in 2003, and tested 19 different adjuvants from eight companies and compared the downwind drift among the adjuvants and water. Two separate aircraft were used, one for low speeds, 115 mph speed, and one for high speeds, 150 mph speed. The aircraft were both calibrated to apply 3 gallons per acre (GPA). Water sensitive paper was used to measure downwind drift both on the ground and on airborne collectors. Results indicated that some adjuvants reduced the amount of drift compared to water only, while other adjuvants increased the amount of drift. However, results were not consistent among aircraft, with some products reducing drift with the slow speed aircraft but actually increasing drift with the high speed aircraft and vice versa.

From left to right, front row, ASABE Technical Session organizer Brad Fritz, Wolf Consulting and Research's Bob Wolf and Yubin Lan of the USDA-Agriculutural Research Service in College Station, Texas, listen along with audience members to a presenter at the ASABE/NAAA Technical Session.

The second project was a follow-up field study and included 10 adjuvants from five manufacturers. All tests were carried out using a single aircraft operating at 156 mph and calibrated to apply 3 GPA. As before, downwind drift was measured using water sensitive cards positioned both on the ground and in the air on drift collection towers. Similar to the 2003 study, some of the adjuvants decreased drift compared to water only while other adjuvants increased drift.

The third research project, in 2011, was conducted using the new USDA-ARS high speed wind tunnel and its HELOS laser diffraction droplet sizing system. In the wind tunnel, the droplet size of various adjuvants was tested with two different nozzles, a flat fan and a rotary atomizer. The nozzles were both tested with an airspeed of 137 mph. The adjuvants were tested in a spray solution that contained an SC fungicide formulation and compared to a water-only solution, a solution with water and a surfactant used to mimic pesticide formulations, and a solution containing water and the SC fungicide with no additional adjuvants. Some of the adjuvants increased the percentage of spray volume contained in droplets smaller than 100 microns in diameter compared to a solution containing just the SC fungicide, meaning they increased the risk of drift when added to the spray solution. Other adjuvants did reduce the formation of small droplets during atomization compared to the SC fungicide only solution, thus lowering the risk of drift. Some adjuvants performed differently between the two nozzle types, in that they reduced small droplets with one nozzle type but increased small droplets with the other nozzle type.

More specific information about the products tested and their results are available in the 2012 ASABE/NAAA Technical Session paper at *http://apmru.usda.gov/aerial/*.

TAKEAWAY: Spray adjuvants have an effect on droplet size during aerial application. Some products increase droplet size and reduce the risk of drift, while some products do the opposite. Aerial applicators should use caution when selecting an adjuvant for their applications. Future research will provide better recommendations as to what adjuvants should be used for various applications.

Droplet Size Classification System

Presenter: *Brad Fritz, USDA-ARS*

We all know droplet size impacts both efficacy and drift, and many aerial application research projects and educational efforts focus on differences in droplet size among various nozzle types, setups, spray solutions and flight parameters. Droplet size statistics such as VMD and the percentage of spray volume contained in droplets smaller than 100 microns can be compared among various treatments to determine the best options for an application. Various droplet measuring systems and techniques are used to evaluate droplet size, and herein lies a problem. Not every system or technique measures droplet size the same way, meaning the exact same setup measured with two separate droplet analyzing systems will produce different results. So how do you accurately compare two nozzle types or adjuvants if they were measured by two different systems? That's where the droplet size classification system comes in. The droplet size classification system uses a series of droplet size classes rather than actual droplet size measurements. These classes range from extremely fine (smallest droplet class) to ultra coarse (largest droplet class).

Each lab wanting to evaluate nozzles or other application variables first measures the droplet size of a series of reference nozzles, which are specific nozzles operated at specific pressures. The droplet sizes from these reference nozzles create the boundary curves (plotted graphs of the reference nozzle's droplet spectrums) between the various droplet size categories. For instance, one nozzle's droplet size represents the dividing line between the fine droplet class and the medium droplet class. The droplet spectrum curve for the nozzle the lab wishes to test is measured and compared to the reference nozzle data. The nozzle tested will have its droplet size classified based on the smallest category into which crosses, excluding what happens with the really large droplets in the droplet spectrum.

TAKEAWAY: The droplet size classification system allows for valid comparisons to be made between nozzle types or other application setups that have been measured on different droplet size measuring systems. Eventually, all pesticide labels will have a required droplet class or classes on them, and the droplet size classification system will allow aerial applicators to make applications in compliance with the label.

Droplet Size and the Effects of an Active Product and Adjuvants

Presenter: *Brad Fritz, USDA-ARS*

This presentation continued to examine the impact both active pesticide products and adjuvants have on the droplet size for aerial applications. The study involved using spray solutions that contained Roundup PowerMax (PM) alone and with several spray adjuvants, including a crop oil concentrate (COC), a micro emulsion (ME), a methylated seed oil (MSO), a silicone surfactant (Si), and two polymers (P1 and P2). Two nozzle types were used, a flat fan nozzle and a rotary atomizer. Droplet size was measured for the various treatments using the new USDA-ARS high speed wind tunnel, with air speed ranging 15–180 mph for the flat fan nozzle and 120–160 mph for the rotary atomizer. The rotary atomizers were set up to provide a very fine droplet spectrum, not what would typically be used for herbicide applications, for purposes of this research project only. The PM alone and PM with ME, MSO, and P2 were tested with the rotary atomizer.

For the flat fan nozzles, the percentage of the volume of spray contained in droplets smaller than 100 microns in diameter fell into two distinct groups for most of the speeds tested. The PM solution only and solutions with PM and Si, P1, and P2 had a higher percentage of volume in small droplets (higher risk of drift) than solutions with PowerMax and COC, ME and MSO. As the speed approached 180 mph, the two groups began to merge, meaning there was less difference between the different spray solutions at higher speeds. There was less separation in the VMDs for the various spray solutions, especially at speeds greater than 120 mph. Compared to other solutions, the two polymers increased the VMD and percentage of spray in large droplets. The oil based adjuvants (COC, ME and MSO) reduced volume of fine droplets compared to PM alone (lowered risk of drift), while the Si and two polymers had little impact on the fine droplets. Overall, there was only 3–4 percent difference between the different spray solutions at airspeeds greater than 160 mph. There was a reversing of trends among the spray solutions with the rotary atomizers, with two distinct groups. At all speeds between the 120 and 160 mph tested, the ME and MSO solutions had a much smaller droplet spectrum than the

PM alone and P2 solutions. The impact of adjuvants is not likely to be consistent across nozzle types, pesticide formulations and tank mixes.

TAKEAWAY: The active pesticide products and spray adjuvants both impact spray droplet size during aerial applications, working to either increase or decrease droplet size depending on the product. Droplet size responses to products are not consistent among nozzle types, making it more difficult to predict what will happen when specific products are added to the spray mixture. At speeds above 160 mph, differences between spray solutions begin to disappear as speed becomes the dominant factor in determining droplet size.

Variation in Tank Mix Atomization

Presenter: *Russ Stocker, Bob's Flying Service*

Another presentation also covered the impact various tank mixes have on spray droplet size. Droplet size was recognized as the most important factor in spray management that an aerial applicator has control over. Various factors influence the droplet size, including the various components of the spray solution, including water, pesticide product or products used and any additional adjuvants added. The products added to the tank mix affect the dynamic surface tension, equilibrium surface tension, extensional viscosity and shear viscosity, all of which can impact spray droplet size. The various tank mixes can vary significantly in final resulting droplet size and impact both the efficacy and risk of drift. Evaluating the droplet size created by a tank mix is difficult, but new technology being developed and evaluated measures the vibration at the nozzle during atomization. There are repeatable trends between vibration measurements and droplet size produced by tank mixes, with different tank mixes vibrating differently at certain frequencies. This means it is possible to determine the droplet size of tank mixes by measuring the nozzle vibration during an aerial application.

TAKEAWAY: Droplet size during aerial applications is critical for both application effectiveness and drift reduction. The various products in a spray mixture affect droplet size, making it difficult to determine the droplet size for a spray mixture with many products in it. A new system that measures vibration at the nozzle during atomization allows droplet size to be measured in flight during the application.

String System for Swath Uniformity Testing

Presenter: *Clint Hoffmann, USDA-ARS*

The WRK String System has been used at many Operation S.A.F.E. fly-ins and continues to serve the aerial application industry well. The weak link in the system is the Turner fluorometer used to measure the concentration of dye on the strings. These are old fluorometers, and it has become more difficult in recent years to replace or repair them. The USDA-ARS Aerial Application Technology Group is developing a new system to complement the existing WRK systems but using more modern components. This new system will be similar to the existing system and easy to operate. String will be analyzed as it is brought in and there will be short turnaround time of about two minutes between each pass. The short turnaround time and ability to analyze the string immediately on the flightline as it is reeled in means it will be possible to run two aircraft at the same time. The software being developed to run the new system will allow the analyst to shift the spray patterns to account for shifting winds. The software will also have auto data fill based on the aircraft's N number. Right now the cost appears to be around $2,500 for the components and $1,000 for the software license from LabView. The USDA-ARS hopes to have two systems tested this spring at Operation S.A.F.E. fly-ins.

TAKEAWAY: The USDA-ARS Aerial Application Technology Group is designing a new string measurement system with a new fluorometer for use at Operation S.A.F.E. fly-ins to measure spray pattern uniformity and determine optimum swath width.

Spray Quality and Efficacy

Presenter: *Greg Kruger, University of Nebraska–Lincoln*

The final presentation discussing droplet size dealt with research based on ground applications, but the results are valid for all pesticide applications whether they are made by air or ground. The goal of the research presented was to determine the relationship between the spray droplet size used during application and the resulting efficacy. There were four locations throughout Nebraska, with five plant species used to evaluate herbicide performance. Five nozzles were used to create fine, fine/medium, medium, coarse and extremely coarse droplet spectrums, and five different herbicides were evaluated. All applications were made at 10 GPA.

With glyphosate, there was little difference in percent efficacy among the different droplet size classes. For FirstRate control of amaranth, the coarse droplet size had the greatest efficacy. For controlling velvetleaf with FirstRate, there was no clear pattern, but the fine/medium droplet size provided the greatest control. Clarity was similar to glyphosate in that there was very little difference in percent weed control among the various droplet size classes. For Reflex, the fine/medium and medium droplet classes provided better weed control than the other droplet size classes. For controlling volunteer corn with SelectMax, the fine/medium and medium droplet size classes again provided the best control.

A second study compared herbicide efficacy from ground applications at various spray volumes from 5 to 20 GPA all made with a fine spray droplet class. For the systemic herbicides, there were not significant differences in weed control among the various spray volumes tested. With less systemic herbicides, though, there were some differences in weed control, with higher spray volumes having better control on certain plant species.

TAKEAWAY: Droplet size impacts the efficacy of herbicide applications. Some herbicides show little difference in weed control when different droplet size classes are used, while others are more sensitive. It is important to understand the products you are using, the pest species targeted in the application and to select and set up your spray nozzles correctly.

Low Volume Aerial Applications

Presenter: *Scott Bretthauer, University of Illinois*

The final presentation of the ASABE Technical Session was a review of research projects examining the efficacy of low volume aerial applications. Important considerations for making a successful low volume aerial application include droplet size, application height and swath width, nozzle type and adjuvants. Research from 2009 and 2010 comparing 0.5, 1 and 2 GPA fungicide applications on corn showed that at all volumes, the use of crop oil concentrate (COC) improved deposition and coverage. The degree of improvement increased at lower volumes, particularly at 0.5 GPA. In 2010, the two 1 GPA treatments with COC had greater deposition than the 2 GPA applications without COC. There was not a clear relationship between droplet size and deposition either year.

A USDA-ARS study examining 1 and 2 GPA fungicide applications on corn showed that the 2 GPA applications resulted in more deposition than the 1 GPA applications. At 2 GPA, the rotary atomizer had greater deposition than the flat fan nozzles; at 1 GPA the electrostatic system had greater deposition than the flat fan nozzles or rotary atomizers, which had fairly equal deposition.

A study by Ken Ostlie and the University of Minnesota examining soybean aphid control found that a 1 GPA electrostatic aerial application dramatically outperformed a conventional 4 GPA aerial application and a 20 GPA ground application. Initial results from an aerial corn fungicide application project conducted in Illinois in 2012 showed that the 2 GPA application outperformed both the 1 and 3 GPA applications. A second aerial project conducted in Illinois in 2012 compared glyphosate performance between an aerial application at 1 GPA and a ground application at 12 GPA. For 3 out of 4 weed species, there was no difference in control between the two applications. On waterhemp that average 5–6 feet in height, control was slightly better with the 12 GPA application. Aerial photographs of the plots show that the swath width used for the application was slightly too wide for the height flown, resulting in slight streaking between passes that was still present during the weed control evaluations, explaining the difference between the two treatments in waterhemp control.

USDA-ARS low volume glyphosate research showed 3 GPA applications with flat fan nozzles and rotary atomizers had greater deposition than 1 GPA electrostatic applications, with the electrostatic system turned both on and off. In terms of efficacy, the rotary atomizer at 3 GPA had the greatest weed control, followed by the flat fan nozzles at 3 GPA and the 1 GPA electrostatic system on application. The 1 GPA electrostatic system with the charge turned off had significantly reduced weed control compared to the other treatments.

TAKEAWAY: Low volume aerial applications can be very effective for controlling pests. Setting up and operating the aircraft correctly are critical for making successful low volume applications. Droplet size and adjuvants that protect the smaller spray droplets from evaporation are some of the more important considerations for low volume aerial applications.

If you weren't able to attend the ASABE Technical Session in Savannah, hopefully these summaries help fill you in on what you missed. The presentations are available online at *http://apmru.usda.gov/aerial/*, and the authors would love to hear from you should you have any questions about their work. Please write to *aerialapplication@gmail.com* with any comments, suggestions or questions. Plans are already underway for the 2013 ASABE Technical Session. ■

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2012 NAAA awards

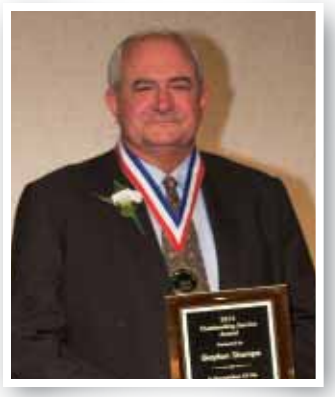
Honoring Those Individuals Who Serve the Agricultural Aviation Industry with Humility and Distinction

HONOR ROLL *From left to right, back row: Allied Industry Individual Award recipient Bob Bailey; Agrinaut Award recipient Leonard Felix Jr.; Evans-Christopher Operation S.A.F.E. Award recipient Richard Whitney; Outstanding Service Award recipient Gaylon Stamps; Most Active Woman Award recipient Jane (Barber) Pitlick; National Agricultural Aviation Hall of Fame inductee Wayne Handley. Front Row: John Robert Horne Memorial Award recipient Van Lucas; Larsen-Miller Community Service Award recipient Eric Klindt; William O. Marsh Safety Award recipient John J. "Dusty" Dowd Jr.; John Robert Horne Memorial Award recipient Lukas Johnson; and Opal & Bill Binnion Memorial Award recipient Chip Kemper.*

Culminating the 46th Annual NAAA Convention & Exposition, the 2012 Farewell Banquet and Awards Ceremony was a celebratory evening befitting the numerous awardees recognized for their efforts on behalf of agricultural aviation. Hosted by emcees Rod Thomas and Leif Isaacson the awards ceremony honored the accomplishments of 11 individuals who represent the "cream of the crop" among agricultural aviation.

The ceremony was punctuated by many heartfelt acceptance speeches, including remarks by Gaylon Stamps who was awarded with the Outstanding Service Award. "Receiving the Outstanding Service Award is the greatest honor of my 40-year professional career. I return a heartfelt 'thank you'!" he said.

In the articles that follow we hope to provide you with a glimpse of the character and sincerity of this year's honorees. NAAA appreciates the authors sharing their personal insights and stories and congratulates all of the 2012 award recipients. —*Danna Kelemen, Manager of Public and Government Relations*



2012 OUTSTANDING SERVICE *award*

GAYLON STAMPS
Stamps Spraying Service Inc. • Panhandle, Texas

A Servant's Heart

By Randy Hale
Hale Dusting Service Inc.
Banquete, Texas

Outstanding service by definition means an exceptionally good, clearly noticeable act of helping or doing work for someone. The NAAA Outstanding Service Award is presented to those individuals who have shown this quality in the service and promotion of the ag aviation industry and its association. NAAA's success depends on the voluntary service provided by its members, and we are blessed to have many talented men and women in our industry. Occasionally, someone's service is exceptionally good and clearly noticeable. Gaylon Stamps is one of those remarkable individuals whose service to his industry, his family, his community and his fellow human beings stands out as exceptional.

Anyone who has been around an NAAA board meeting will have seen Gaylon on the move—going from room to room and committee meeting to committee meeting. He served on the 2012 NAAA Executive Committee as secretary, several NAAA and NAAREF committees as well as the NAAREF Board of Directors. He has represented the great state of Texas on the NAAA Board since 2006. He is a senior PAASS presenter, taking the premier ag aviation safety program to several state and regional conventions during the fall and spring seasons and also spending countless hours working on the contents of the program. Before working on the national level, Gaylon served in every officer position of the Texas Agricultural Aviation Association, including president in 1998. He continues to travel to Austin today on a regular basis to represent TAAA before regulatory and legislative officials.

If representing one state wasn't enough, Gaylon is also active in the New Mexico Agricultural Aviation Association (NMAAA) and serves as secretary and on several NMAAA committees. He spends numerous hours planning and organizing their convention and activities, including New Mexico's world famous barrel throwing contest. Gaylon's behind-the-scenes involvement with that activity has helped to raise thousands of dollars for college scholarship awards, enabling NMAAA to award multiple scholarships annually. According to Richie Crockett, New Mexico's NAAA Board Representative, "Gaylon is simply the type of person who sees something that needs to be done and jumps in with both feet."

While his involvement in the aerial application industry illustrates quite a résumé of service, it doesn't stop with ag aviation alone. Gaylon also served his community for nine years on the local school board and he is an Elder in his church. He is a devoted husband, father, grandfather and foster parent. He and his wife Pat and their family have taken into their hearts and home around 100 foster children. For years at every meeting or convention they attended, Gaylon and Pat were seen carrying a new baby around, showing it off.

It doesn't take much to get Gaylon talking about his family or his occupation. Just ask him, and when he does you can see that God gave him a servant's heart—one as big as Texas. NAAA's 2012 Outstanding Service Award couldn't go to a greater servant than Gaylon Stamps! ■

Randy Hale served as NAAA President in 2006 and was recently elected NAAREF President.

2012 AGRINAUT award

LEONARD FELIX JR.
Olathe Spray Service Inc. • Olathe, Colo.

A Fixture in Ag Aviation

By Kyle Scott
Scott Aviation Inc.
Fort Morgan, Colo.

The 2012 recipient of the Agrinaut Award is an individual I first met years ago. Little did I know at the time what a fixture he has been and continues to be in the aerial application industry—not only in Colorado but also at the national level.

The Agrinaut Award is presented by NAAA to an ag aircraft operator or operating organization that has made an outstanding contribution in the field of ag aircraft operations, is actively engaged in commercial agricultural application and has contributed to the "state-of-the-art" of the industry as a whole. I can think of no other individual more befitting of this recognition than Colorado's own Leonard Felix.

Leonard has been in this business for 43 years. He started out in the Army, hoping to get pilot training, but due to a fluke in obtaining a security clearance he ended up being too highly trained in other M.O.S. (military occupation system) duties to be made a pilot. It appears the Army's gaffe was to the gain of the ag aviation industry.

After the Army, Leonard attended Ag Aviation Academy in Minden, Nev., then went on to spend two years flying for other operators in Colorado and Kansas. After his second season he returned home to Olathe, Colo., and formed Olathe Air Service (which is now Olathe Spray Service Inc.) with an Aeronca Champ with a Sorenson rig. Times were lean so Leonard spent his winters working as a millwright to make ends meet. Today he runs his business with his two sons and operates two turbine Air Tractors, an AT-402B and AT-402; a Piper Pawnee 260 Hutch/wing; and two Bell 47 Soloy Turbine Helicopters.

Leonard has been active in the industry from the very beginning. He served his first term on the Colorado AAA (CoAAA) board from 1972 to 1984 and after a short break re-joined the board in 1988 and has served ever since. Leonard is a fixture at CoAAA board meetings, and most would agree his election to the board was a lifetime appointment. Despite the distance he has to travel to attend Leonard is always there; and the less experienced members of the board truly respect his input. In 1989 he was appointed to the Colorado Pesticide Advisory Board and is chairman of the board today. Leonard joined NAAA in 1976 and has missed only two conventions in 36 years. He served as NAAA VP in 1993 and became a PAASS presenter in 2005. In 2005 Leonard received the NAAA Outstanding Service Award and in 2007 the Colorado AAA Outstanding Service Award. In 2011 he joined the prestigious ranks of Falcon Club inductees.

Leonard has been especially instrumental during the last two years in the battle over the duplicative, burdensome NPDES pesticide general permits. He has been the point man for the Colorado NPDES PGP, including testifying on behalf of NAAA before the U.S. House of Representatives Small Business Committee. Leonard was instrumental in having the Colorado Deprtament of Public Health and Environment (CDPHE) clarify in their NPDES rule that waters removed for use (flood irrigation) are exempt from the PGP.

When told of this most recent award Leonard said, "I was flabbergasted—shocked and in awe that I would be nominated and chosen. I was just doing what I needed to do to stay in business."

Leonard has a lengthy list of accomplishments, and it is my honor to recognize him as this year's distinguished Agrinaut Award recipient. ■

Kyle Scott owns and operates Scott Aviation Inc. and served as NAAA Treasurer in 2012.

2012 LARSEN-MILLER COMMUNITY SERVICE *award*

ERIC KLINDT
Wilbur-Ellis Co. • Campbell, Minn.

An Enthusiasm for Serving Others

By Scott Bretthauer
University of Illinois, Application Technology Extension Specialist
Urbana, Ill.

In the several years that I've known the newest recipient of the Larsen-Miller Community Service Award, I have had the opportunity to work with him as a member of the PAASS Program Development Committee. To say he is extremely passionate about all things related to agricultural aviation is an understatement. He takes his responsibility as a PAASS presenter very seriously and is an enthusiastic presenter. On more than one occasion I have wondered if it was possible to wind him down after he got going about a subject—his enthusiasm is simply contagious. Not surprisingly, Eric Klindt is just as enthusiastic about other aspects of life as well, especially in his service to others.

Serving his community, both his home of Campbell, Minn., and his base of operations in Wahpeton, N.D., is very important to Eric. In the past he has served as a member of the Wilkin County sheriff's posse. Recently, while working at his second job as the owner of a bus and limousine company, Eric witnessed an assault on a local bar owner. The suspect was involved in an argument with the owner and ended the argument by throwing a brick at him, striking him in the head. The suspect then fled the area in an attempt to escape justice. Without hesitating, Eric gave pursuit. He was able to chase the suspect down, subdue him and hold him until police arrived to make the arrest.

Helping others just comes naturally to Eric, and he often assists local law enforcement using his aviation skills. Whenever there is a missing person, the first phone call goes to Eric. He also provides use of his aircraft and piloting skills during floods in an effort to help local officials survey the water flow situation and look for people in need of rescuing. In addition, Eric works with local law enforcement, fire and emergency medical responders and holds training sessions using NAAREF's *First Response* training video to educate emergency responders about what to expect if they are called to an ag aircraft accident or other accident involving the possible release of a hazardous material.

Eric's service has not gone unnoticed in his community, and he and his wife Shana were selected to participate in the Emerging Leaders Program of the Red River Valley. Eric and Shana were selected by the previous couple from their county, and had the honor of being the 50th couple from their county. While participating in the leadership program, Eric met someone associated with his former university. As a result he was nominated for the University of Minnesota, Crookston Outstanding Alumni Award. Eric went on to win this award based on his impressive list of accomplishments.

In addition to the aforementioned examples of Eric's service, the list could go on and on. He helps with the local Lions Club annual fundraiser, plows snow for several townships and a city and has also used his company's bus to help fellow community members in the past, such as picking up military veterans returning home from deployment.

Eric is simply always willing to help others and even flew me to Louisville in October for the NAAA Fall Board Meeting. It is clear to all who know him that Eric Klindt is an enthusiastic, passionate individual about both his profession as an aerial applicator as well as helping his community out in any manner possible. Eric, I would like to personally congratulate you on a well-deserved community service award. ■

Scott Bretthauer is a PAASS presenter and Operation S.A.F.E. analyst. He received the Allied Industry Individual Award in 2009.

2012 WILLIAM O. MARSH SAFETY *award*

JOHN J. "DUSTY" DOWD JR.
Syracuse Flying Service Inc. • Syracuse, Kan.

The Real Deal: A Modern Day Professional Ag Pilot

By Rod Thomas
Thomas Helicopters Inc.
Gooding, Idaho

Regardless of how long you've known him, it doesn't take long to figure out that Dusty Dowd is the real deal. My association with Dusty is limited to about the last 10 years and it wasn't right away that I even knew his real name was John. What I did figure out right away, however, is that John J. "Dusty" Dowd Jr. is a professional that all of us who make our living flying ag aircraft should be proud to call one of our own. He is thoughtful, articulate and a good example of a modern day professional ag pilot. A poster boy, if you will, of the kind of individual our industry needs to displace that old image of a "law breaking, devil may care" crop duster.

In 2009 Dusty literally served as the face of agricultural aviation in a front-page *Wall Street Journal* article that examined the necessity for aerial application. The article conveyed both the need for new ag pilots and the skill and dedication it takes to become one. In the article Dusty is portrayed as a tough-love, stickler-for-safety mentor for young pilots hoping to break into the industry. The article shined a positive light on what can sometimes be perceived as a dangerous, thrill-seeking profession for "hot dog" pilots looking to make a quick buck and an easy life.

I have had the privilege of working with Dusty on two separate PAASS programs and can tell you his contribution was invaluable. As an aeronautical engineer (not to mention an A&P with IA) his insight and expertise were invaluable when our industry took a close, hard look at cracks in the wing spars of some ag planes related to how we fly and inspect those aircraft. Dusty donated his time to help us put together a safety and informational module using his own airplane as an example. The result was a well-received program that we feel certain brought airplanes in for inspections that might have otherwise been missed.

Most recently I had the opportunity to sit down with both Dusty and Wayne Handley and conduct an interview for a PAASS module we named "Stall Spin Avoidance & Other Aviation Wisdom." It was a pleasure to be in the same room with a couple of ag aviation legends, and this season all who attend the PAASS Program will get to see the final results of that interview. It was just another example of Dusty wanting to give back to this industry that he loves.

I won't give you all of the details so as not to spoil the program when you see it, but I can assure you the places we have put on the program thus far have been thrilled with the module. Dusty covers the topic of "wind gradient" better than anyone I have heard. The old saw about the danger of the downwind turn that "Jenny" pilots were warned about over 90 years ago might be advice you want to heed. Almost 20,000 hours flying ag and a keen investigative mind lends itself to providing those well thought-out nuggets of information.

Thanks, Dusty, for being one of us and most importantly sharing ideas honed from years of aviation experience that will help keep all of us safe. You are truly a worthy recipient of this prestigious safety award. ■

Rod Thomas served as NAAA President in 2007 and recently concluded a two-year term as NAAREF President. He received the Outstanding Service Award in 2011. The William O. Marsh Safety Award recognizes significant achievements in safety, safety education or an outstanding operational safety program.

2012 ALLIED INDUSTRY INDIVIDUAL *award*

BOB BAILEY
Bailey Flying Service Inc. • Dalhart, Texas

Providing Legendary Support

By Chip Kemper
Queen Bee Air Specialties Inc.
Rigby, Idaho

The small Texas Panhandle town of Dalhart is legendaryfor being the home of one of the most famous cowboy gatherings in the region—the XIT Rodeo. So it's no surprise that the recipient of the 2012 Allied Industry Individual Award is legendary in his own right for his work on behalf of NAAA and the agricultural aviation industry. The Allied Industry Award is presented to an individual who has significantly contributed his or her efforts for the benefit of the allied industry and their exhibit efforts, and Bob Bailey is indeed a model example of what it means to contribute to the industry in noteworthy fashion.

Bob began assisting in his family's business in Dalhart when he was old enough to drag a loading hose and now serves as the man out in front who manages the multi-state operation. Bailey Flying Service has been in operation since 1971, and after finishing college Bob took over the field scouting duties and eventually the overall management of the family business.

In 1997 Bob joined the NAAA Board of Directors as the representative from New Mexico. He has participated in many committees including: Budget and Finance, Long Range Planning and the Nominating Committee. In 2008 Bob served with distinction as the NAAA President.

Perhaps most time consuming and his biggest contribution to the industry is Bob's involvement with the annual NAAA Convention & Exposition. Since 2000 Bob has either chaired or co-chaired NAAA's Convention Committee. This event is the critical annual gathering of our industry and is a primary revenue generator that helps ensure the vibrancy of the association. This task includes working with NAAA staff, vendors, venue staff, negotiating contracts and securing many auction items and donations.

On behalf of the association, Bob has traveled thousands of miles and viewed numerous potential future sites for the trade show. He has worked tirelessly to ensure this event is well planned and organized. In the time he has been involved it has continued to grow and prosper for the Operator Members, Pilot Members, Allied Industry and all those who rely on the continued success of NAAA.

The management of his business and his many other commitments to the industry keep Bob very busy. He pilots a Cessna 210 to move himself around the region so he can spend more time with his wife Susan and their children. Bailey Flying Service has utilized a variety of modern turbine powered aircraft to treat hundreds of thousands of acres in Arizona, Kansas, New Mexico, Oklahoma, Texas and the Dominican Republic. The crops treated include corn, wheat, milo, alfalfa and a variety of vegetable crops. Under his management, the company has grown its fleet size and has diversified into several other areas including the use of ground application and fertilizer sales.

The NAAA Allied Industry members are pleased to present Bob Bailey with the 2012 Allied Industry Individual Award for his long-term commitment and legendary efforts on behalf of the association and in particular his renowned efforts in making the annual NAAA Convention & Exposition the success that it is today. ■

Chip Kemper is the chairman of NAAA's Allied Industry Committee. The Allied Industry Individual Award is selected by NAAA's allied industry directors.

2012 MOST ACTIVE WOMAN *award*

JANE (BARBER) PITLICK
Bret's Spray Service • Onida, S.D.

A Paradigm for Service

By Jayne Rucker
Rucker Flying Service Inc.
Burdett, Kan.

The 2012 Most Active Woman Award is being presented to Jane (Barber) Pitlick. The award recognizes an outstanding contribution by a woman who is active in the affairs of the industry or the association, and there isn't anyone more deserving of this honor than Jane. Her service to the WNAAA Board and NAAA are longstanding, and how she manages to accomplish all that she does, both within the industry and outside of it, is a testament to her belief in community service and volunteerism.

Jane is a part of Brett's Spray Service in Onida, S.D., and has been actively involved with NAAA since 1992. She was elected to her first term as a director for the WNAAA in 1994 and since that time Jane has been president of the Women of South Dakota Aviation Association (WSDAA) several times as well as Vice President of the WNAAA in 2008 and 2009 and President in 2010. Additionally, she has been an Athena presenter since 2005 and is also fondly known as the "nametag lady" for her work in making the magnetic nametags for all NAAA and WNAAA directors. Whatever the responsibility, Jane takes on the role with commitment, thoughtfulness and humor.

Brett's Spray Service has been in business since 1986 and was previously owned and operated by Jane's late husband, Brett, who passed away in 2003. Today the business is owned by Jane's stepson Terry Barber. The company treats winter wheat, spring wheat, corn, and some soybeans and sunflowers. Jane maintains an active role in the business by managing the office and assisting with some of the mixing and loading. Jane and Terry also own Star-Flex, a business that sells antenna mounts through dealers across the U.S.

Perhaps what is so amazing about Jane is that, on top of her work within the industry and at Brett's Spray Service, she manages to do about a thousand other things. While one of her greatest joys is spending time with her grandchildren, Jane also finds time to be a worthy matron of the Onida Eastern Star No. 138, be active in the Onida Presbyterian Church and the Okobojo Chapter of Pheasants Forever, and serve as the Sully County Coroner. She says she ran for coroner in 2008 on the understanding that it was an easy job that only involved two to three cases a year. Unfortunately, her first case (a murder/suicide attempt) happened 21 days after she was sworn into office. Jane remained undeterred and says she felt privileged to help that particular family in the healing process.

Jane Barber Pitlick is truly an amazing woman who has willingly volunteered her time, her intellect and her heart to the agricultural aviation industry. She truly serves as an ambassador for our occupation. Jane (Barber) Pitlick—WNAAA/NAAA committee member/chairwoman, WNAAA Past President, Athena Presenter, "Nametag Lady," and 2012 NAAA Most Active Woman. It couldn't happen to a more deserving individual. Congratulations and thank you, Jane, for sharing your time and talents with the WNAAA and NAAA. ■

Jayne Rucker served as WNAAA President in 2006 and has continued to serve the WNAAA and NAAA Boards of Directors in a variety of ways. She works with her husband Cary at Rucker Flying Service, an aerial application business in central Kansas.

2012 OPAL AND BILL BINNION MEMORIAL *award*

CHARLES "CHIP" KEMPER
Queen Bee Air Specialties Inc. • Rigby, Idaho

A Gem of a WNAAA Supporter

By Danna Kelemen
Manager of Government & Public Relations

The Opal and Bill Binnion Award was first awarded in 1996 by the WNAAA in an effort to recognize those individuals who contribute to the WNAAA in their effort to educate the public about aerial application. Each year the WNAAA works to ensure it honors an individual who has gone above and beyond in his or her assistance to publicize the positive aspects of ag aviation. This year's recipient, Chip Kemper, is no exception and you might even say his support for the organization is a learned trait. Chip's mother, Gail, was extremely active in the WNAAA serving as President, Vice President and Secretary, in addition to being chairwoman for several committees over the years.

Chip's family purchased Queen Bee Air Specialties in Rigby, Idaho, in 1977 and it wasn't long before he was assisting with the business while simultaneously completing his education. Chip and his wife Mary now own the business and Chip serves as president of the company.

While a lot has changed in his family's business over the years, their commitment and support for the WNAAA has not wavered. "Chip has been a big supporter of safety and educational programs," said Donita Lockwood of Okanogan Air Service Inc.

Chip is known for being a long-time supporter of NAAA and WNAAA, both financially and with his work contributions. A prime example of his generosity and commitment is evident in his 2012 financial donation to provide necessary funding for the Athena Project, a WNAAA program that educates and helps women involved in the agricultural aviation industry. His willingness to see a financial need and jump in to support educational efforts of the WNAAA is one of the primary reasons the organization chose to recognize Chip this year.

Chip is an advocate for the industry in a multitude of ways, having spoken to Congressional staffers regarding food production and safety, and supporting *Agriculture in the Classroom* through donations and with his time and expertise. Additionally, he was honored in 2011for his contributions by joining the prestigious NAAA Falcon Club.

While Queen Bee Air Specialties no longer consistently performs aerial application for local growers, they have a long history in that area and still assist other operators when the need arises. Most recently, Queen Bee participated in the BP oil spill cleanup performing nearshore spraying of oil dispersants. Today they employ 17 full-time employees and up to 35 people during peak times in aerial firefighting, aircraft sales, parts distribution and aviation maintenance. The company is the dealer for Air Tractor aircraft for the northwest region of the United States, the Dakotas and all of Canada, and continues to be the cornerstone of the Rigby, Idaho, airport.

Chip, Mary and Gail Kemper, Chip's mother.

Idaho is often called the Gem State and Chip Kemper and Queen Bee Air Specialties are certainly gems within the agricultural aviation industry. Thank you, Chip, for your support for the WNAAA and congratulations on this noteworthy recognition. ■

2012 JOHN ROBERT HORNE MEMORIAL *award*

VAN LUCAS
Agri-Tech Aviation Inc. • Indianola, Iowa

Going That Extra Mile

By Wes Sharp
Agri-Tech Aviation Inc.
Indianola, Iowa

Knowing what you want and the path to achieving it is often harder than it looks. In the ag aviation industry this adage holds especially true. Ag pilots don't generally just step into a job; they have to literally work their way up from the ground crew before earning a seat in the cockpit. The journey is an arduous one meant to discourage those looking to make a quick dollar and an easy life. The industry is in need of pilots, but more importantly, we need pilots who are safe, motivated and willing to go that extra mile to be the best and safest in the sky. One of two recipients of the 2012 John Robert Horne Memorial Award, Van Lucas is a perfect example of the type of pilot our industry needs today.

This year marks Van's fifth year of flying ag, but when he first showed up at Agri-Tech Aviation in Indianola, Iowa, in 2007, he was promptly shown the door. Perhaps not literally, but he was certainly discouraged from trying to break into the industry. Terry Sharp, my father and the owner and operator of Agri-Tech, told him the business was not as glorious as it looked. "Van was an ambitious F-16 pilot and I just didn't know if this was the occupation he was bargaining for," my dad says. Van, on the other hand, knew what he wanted and kept showing up throughout the season to assist with loading, maintenance and anything else he could. When the season ended dad and Van came up with a plan to break him into the aerial application industry.

The following year he helped Van purchase a Cessna 188 to mentor and train him to be a successful ag pilot. After a long, safe successful season in the 188 and also assisting Terry Mundell in Oklahoma and flying his AT-402, Van could say he was officially an ag pilot. The next year Van secured a seat in one of our AT-402s and has had four safe, successful seasons in the turbine AT-402.

In the five years Van has been spraying for Agri-Tech Aviation he has had a spotless record—not a missed application, drift complaint or accident of any kind. He has successfully sprayed over 175,000 acres, mostly in southern Iowa which is mainly smaller fields with hills, trees, cross country power lines and wind turbines. On top of being a safe ag pilot, Van is also now in charge of all of Agri-Tech Aviation's and Agri-Flight's aircraft maintenance for a total of six airplanes.

Van has also been instrumental in mentoring new pilots. Over the past two seasons Van has helped Agri-Tech Aviation mentor a new pilot by sharing experiences and advice about breaking into the industry. He also participates in the Com*paass* Rose program at the NAAA Convention when he has been able—working around deployments to Iraq and Afghanistan. This year Agri-Tech Aviation will be hiring its third pilot in six years to mentor and train, and we are confident Van will be a major part of the training process.

Van's wife Vicky has been a vital part of helping Van break into the industry, including loading his plane and taking care of their daughter Reese during the busy summer months. Van remains an active duty F-16 pilot and has been serving our country for 17 years. He volunteers for deployments in the offseason to minimize the possibility of missing the busy Iowa spray season. Van Lucas is truly a model pilot who has gone that extra mile to become an aerial applicator. ■

Wes Sharp is an Affiliated Operator Member. He completed the NAAA/ Syngenta Leadership Training Program as a member of the 2011–2012 class. The John Robert Horne Memorial Award is given to an exemplary pilot with less than five years of ag flying experience.

2012 JOHN ROBERT HORNE MEMORIAL *award*

LUKAS JOHNSON
Boardman Aerial Spraying • York, Neb.

A Passion for Flight

By Andrea Boardman
Boardman Aerial Spraying
Henderson, Neb.

When Billings, Mont., native Lukas Johnson started college at Rocky Mountain College on a football scholarship, he had no idea that his passion would soon change from a love of the gridiron to being airborne. It wasn't long before Luke fell in love with flying, quit playing football and excelled with his flight training. The John Robert Horne Memorial Award recognizes pilots with five years or less experience in ag aviation who have an exemplary safety record, and Luke typifies this description.

He became a flight instructor while still in school and graduated in 2008 with a degree specializing in aviation. With intentions of becoming an ag pilot, he enrolled in the 40-hour ag course at Ag Flight Inc. in Bainbridge, Ga., shortly after graduation. There he flew Super Cubs, 235 Pawnees and an Air Tractor 301. In order to gain some tailwheel experience, he started instructing at Ag Flight in February of 2009.

Luke first started to gain experience spraying in Nebraska in May of 2010 flying a 235 Pawnee. His first revenue load was during the 2010 wheat run in Larned, Kan., flying for Gross Flying Service. In August of 2010, he started flying for Rick and Mary Boardman of Boardman Aerial Spraying in a 300 Brave. By February, Luke had made the decision to move to Nebraska permanently to help around the hangar and hopefully move up to full-time seat at Boardman Aerial Spraying.

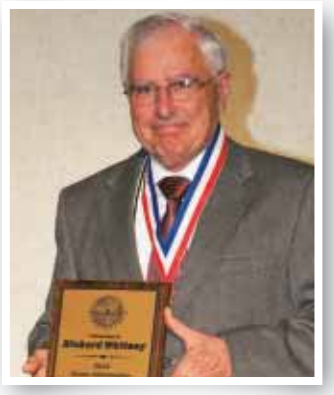
That following summer, in 2011, he flew a 400 Brave during the wheat run in Montana and the corn run in Nebraska. In October 2011, Boardman gave Luke his first turbine checkout in an S2R-T34 Thrush with a Walters's engine. This past summer he flew an Air Tractor 402 during the Kansas wheat run for the Gross family and was upgraded to a new Air Tractor 502 during the Nebraska corn run for the Boardmans. In 2012, Luke sprayed 85,000 acres and flew nearly 600 turbine hours. As of today, he has just over 2,000 hours of total flight time (1,000 hours ag), currently holds a commercial single and multi-engine pilot certificate with an instrument rating and after completing his third season of spraying has a spotless safety record. He also still continues to flight instruct during the off season.

Rick Boardman, Johnson's nominator for the award, speaks very highly of Luke's attributes as a pilot. "Luke is very good with airplanes and really understands how they work," he said. "In addition, he is an extremely hard worker and extremely safety conscious."

Boardman, who recently received his multi-engine rating with instruction from Johnson, continues to be impressed with his knowledge and thoroughness.

Lukas Johnson is indeed deserving of this honor. He truly does have a passion for flight and is the kind of pilot every operator should be so fortunate to have flying for them. ■

Andrea Boardman is the daughter of NAAA Vice President Rick Boardman.



2012 EVANS-CHRISTOPHER OPERATION S.A.F.E. *award*

RICHARD WHITNEY
WRK of Oklahoma • Stillwater, Okla.

An Innovator in Aerial Application

By Dennis Gardisser
WRK of Arkansas LLC
Lonoke, Ark.

The Operation S.A.F.E. Committee on behalf of the National Agricultural Aviation Research & Education Foundation (NAAREF) recognizes individuals or entities that have made outstanding contributions to the Operation S.A.F.E. program. Who more befitting to recognize than one of the men directly responsible for developing the equipment and procedures that led to the comprehensive program of education and professional analysis of application? Dr. Richard Whitney is one of the original innovators of the revolutionary program that has changed agricultural aviation for the better—minimizing the potential for adverse health and environmental effects of agricultural chemical application.

Whitney, a private pilot with a keen interest in aviation, is a Kansas farm boy who earned a doctorate in agricultural engineering from Oklahoma State University in 1972 and taught on the faculty for 25 years, until his retirement in 1999. One of his main research topics involved pesticide application technology with a special focus on aerial application. Through a NASA Grant, he and his colleagues developed the equipment and procedures that led to the NAAA Operation S.A.F.E. Program.

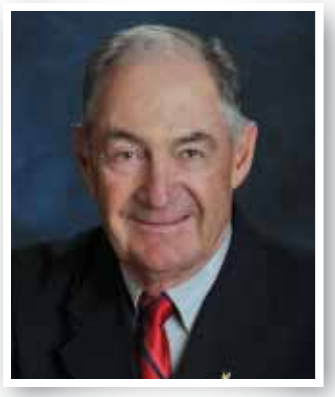
The NASA proposal was a joint effort by Richard Whitney and Larry Roth. The primary purpose of the grant was to develop a technique to sample and measure spray deposition. Although he was not an official member of the NASA project, Dennis Kuhlman became an essential third member of the team. The three men continued to collaborate and by 1984, they had officially joined forces by forming the company WRK Inc.

The backbone of Operation S.A.F.E. is the Professional Application Analysis Clinic, or as it is more simply known, the Operation S.A.F.E. Fly-In. Whitney, Roth and Kuhlman started holding fly-ins around the country in 1980, which enabled them to fine-tune the pattern measuring equipment and streamline the fly-in procedures after each fly-in. Two of their higher profile fly-ins took place in Chandler, Ariz., and Easton, Md. Those fly-ins demonstrated the importance of pattern testing to a national audience and as a result NAAA began thinking about how this activity could be developed into a national education program.

At some point the "ground rules" were formalized and the inaugural Operation S.A.F.E. fly-in was scheduled for October 1981. Dr. Whitney conducted the fly-in using paper tape pattern measuring equipment. Sometime after that, Farrell Higbee, NAAA's Executive Director, contacted Whitney and asked him to present a workshop to "train" people on how to conduct fly-ins using the equipment and procedures they were using at each of their fly-ins. However, Operation S.A.F.E. was not destined to grow significantly until sets of the WRK String System were manufactured and sold to a number of state entities and other organizations. Dr. Whitney led the research that brought about the utilization of cotton string as a collector rather than the paper tape. He also is the wizard that writes and maintains the software utilized worldwide for analyzing both spray and dry material distribution patterns.

Whitney now enjoys retirement in his woodworking shop and assists with Operation S.A.F.E. fly-ins throughout the United States and most recently in Canada and South Africa. ■

Dennis Gardisser was inducted into the National Agricultural Aviation Hall of Fame in 2009.



2012 NATIONAL AGRICULTURAL AVIATION HALL OF FAME *inductee*

WAYNE HANDLEY
Wayne Handley Aerosports Inc. • Groveland, Calif.

Honoring a Living Legend

By Danna Kelemen
NAAA Manager of Government and Public Relations

Since 1982 the NAA Hall of Fame Nomination Board has enshrined 47 exemplary individuals into its National Agricultural Aviation Hall of Fame. Individuals must have contributed on a national level to the agricultural aviation industry before being chosen. This year's inductee is truly a living legend and someone whose efforts have literally saved the lives of countless ag pilots. Wayne Handley is a former ag operator/pilot-turned aerobatics extraordinaire who the agricultural aviation industry is proud to call one of its own.

More than 20 years ago Wayne sold his ag operation and devoted himself full-time to aerobatics. Today, at age 73, he continues to influence legions of ag pilots with his flying lessons, speaking engagements and stall/spin lessons in NAAREF's "Turn Smart" video. He has amazed audiences at airshows around the globe with his "agrobatics" feats and holds the unbeaten world record for inverted flat spins with 78 consecutive turns.

Although Wayne could easily fill an entire hangar with the sheer number of awards he has won over the years, it isn't the limelight that keeps him going. After a near-fatal crash in 1999 Wayne retired from the airshow circuit, but not from imparting his skill and knowledge onto others. He owns and operates Wayne Handley Aerosports Inc. in Groveland, Calif., where he offers a private two-day course on aerobatics, which he refers to as "agrobatics," that past students say is a life-changing, unforgettable experience.

For the past seven years the NAAA Museum Committee has used the proceeds from auctioning off the Harold Miller Helmet Trophy at the NAAA Annual Convention to cover the cost of tuition to the Wayne Handley Aerobatics Course. The "buyer" of the trophy is automatically entitled to attend the course. Wayne again gave back to the industry by offering the committee a reduced price for the course in order to allow them to award a second tuition each year. The winner from state and regional association nominations is drawn at NAAA's convention and awarded the additional scholarship.

"Pilots consistently come away from the course as better pilots—even those with thousands of hours of flying under their belt," Bill Lavender said. Lavender is the owner of AgAir Update LLC and a member of the NAA Hall of Fame nominating committee. "He is truly deserving of this prestigious award."

Wayne teamed up with Dusty Dowd to provide the expertise for the 2012–2013 PAASS Program module on preventing stall/spin accidents. Wayne was the driving force behind the video "Turn Smart" which was produced over a decade ago for the PAASS Program to increase ag pilot awareness of the dangers of using hazardous flying techniques. The information presented in "Turn Smart" has proven to be as important today as it was when the video was produced. The program this year is presented as a roundtable discussion to keep stall/spin accident awareness high for veteran pilots and newcomers alike. Early reviews of the program rate this module as one of the best human factors programs the PAASS Program Development Committee has ever produced.

When asked in 2011 how long he expected to continue his agrobatics course, Wayne asked NAAA to check each year before offering his scholarship, but said he intends to continue teaching into the foreseeable future. This is good news not only for NAAA and the ag aviation industry, but for all of general aviation. Wayne Handley is indeed a living legend whose intuitive knowledge of flying and aerodynamics is beyond comparison. His induction into the NAA Hall of Fame is richly deserved. ■

NAAA BOARD REP JEFF CHORMAN OPENS EYES AT AVIATION EDUCATION EXPO

BY JAY CALLEJA
MANAGER OF COMMUNICATIONS

Allen Chorman & Son Inc.'s Thrush 550 parked at Leesburg (Va.) Executive Airport, a General Aviation airport in the Washington, D.C./Metro area.

LAST OCTOBER, Jeff Chorman of Allen Chorman & Son Inc. in Greenwood, Del., put on a clinic for more than 500 students at an aviation expo in Leesburg, Va., but the real education didn't come until after his crowd-pleasing flying demonstration.

Jeff Chorman

Chorman was one of more than 40 aviation vendors at ProJet Aviation's Aviation Education & Career Expo at Leesburg Executive Airport, a General Aviation airport 35 miles west of Washington, D.C. Students from Virginia, Maryland, West Virginia, Pennsylvania and the District of Columbia stood agape as he made water applications with his Thrush 550 during a series of back-and-forth passes. It was one of the signature moments of the day and stimulated a valuable dialogue about the importance of aerial application, said Clay Hoxton, an aviation insurance broker whose company, The Hoxton Agency, co-sponsored the event. "The kids were really taken by that," he said.

But they weren't the only ones. Even the ProJet pilots, who are seasoned charter pilots, were impressed. "There wasn't anyone in the hangar," Hoxton said. "Everybody involved—the vendors who had very little knowledge of what ag flying is all about—it had a tremendous effect on them."

ProJet started the aviation expo seven years ago to introduce high school and college-level students to the array of career opportunities available in General Aviation, but the event never had an agricultural aviation component until Chorman appeared at the Oct. 26 event. Student participation has doubled since the event's inception, growing from approximately 250 students early on to the record attendance at the seventh aviation education expo.

ProJet Aviation is one of Hoxton's customers, as is Allen Chorman & Son, which is how Jeff got recruited. "I've been trying to get somebody from ag to be involved for a couple of years," said Hoxton, who has a number of ag aviation clients. "I felt compelled to bring an ag representative into this event because it's not only a good career option, but more importantly, it's a great opportunity to educate these kids about agricultural aviation."

After the demo, Chorman answered questions for about an hour from students and educators who approached to get a closer look at the Thrush. "I would venture to say 95 percent of them had never seen an ag plane before," he said.

Chorman, who represents the Northeast AAA on NAAA's Board, did not give a formal presentation, but his responses to the questions asked were a revelation both to the students and their professors. Many of them—such as, how does it work? Are the pesticides safe?—were the

usual ones ag pilots get, but wanting to be prepared for anything, he contacted NAAA Executive Director Andrew Moore beforehand. Moore supplied him with the new NAAA Media Relations Kit, as well as information from the 2012 Aerial Application Industry Surveys and other sources.

"That was actually a big help for me," Chorman said about the media relations kit. In particular, the sections on the importance of aerial application on modern agricultural production, and the environmental and safety aspects of agricultural aviation came in very handy. He reviewed both sections beforehand and was able to mix in several of the talking points and safety statistics into his answers.

Even more so than the students, Chorman said a lot of the professors were surprised at how little chemical is applied on a per-acre basis, and at the scope of the Chormans' operation, considering how close they are to Washington, D.C. "As the crow flies, we're about 80 miles from Washington."

"One of the big questions from people was, if there wasn't ag aviation, how would agriculture be affected?" Chorman said. "A lot of people did not understand how much less food would be produced in the United States without pesticides, No. 1, and without airplanes, No. 2."

Chorman enjoyed the experience so much that he's already planning on doing it again. "I just thought it was very positive for the industry," he said. "Even if they don't ever fly or become associated with what we do, at least they'll have some familiarity with what we do and the amount of care we take to ensure that

ProJet Aviation drew a record number of attendees to the 2012 Aviation Education & Career Expo, an event aimed at high school and college-level students. More than 500 students from four states and the District of Columbia came out for the Leesburg, Va., event.

Americans have a safe and abundant food supply."

NAAA commends Hoxton for introducing this unique forum to the association and applauds Chorman for donating his time to explain what agricultural aviation is—and what it isn't—to an audience that, until then, may not have known the difference. ■

A Snapshot Of Aerial Application

By Lisa Heacox, *CropLife* magazine

To understand how aerial application is viewed by the marketplace, *CropLife* conducted a survey of its readers, which produced some interesting results.

Editor's Note: *This article originally appeared in the September 2012 issue of* CropLife *magazine and was part of a special report sponsored by Air Tractor Inc. on "the rise of aerial application." It is reprinted with permission from* CropLife *and Air Tractor.*

This summer, *CropLife* editors sent out a brief survey to our enewsletter readers to better understand the impact aerial application is having on ag retailers, especially in light of this market's substantial growth in the last five years. While not all 126 respondents answered all 10 questions, they still provided solid information for us to work with. We thank the owners and managers who took the time to share their input. We received almost equal responses between cooperatives and independent dealerships, with a number of returns coming from firms that are a part of a national or regional chain of retailers (not coops).

The responses only highlight the importance of aerial work, with fully 88% of companies saying they used the services of an aerial application professional in the last two years.

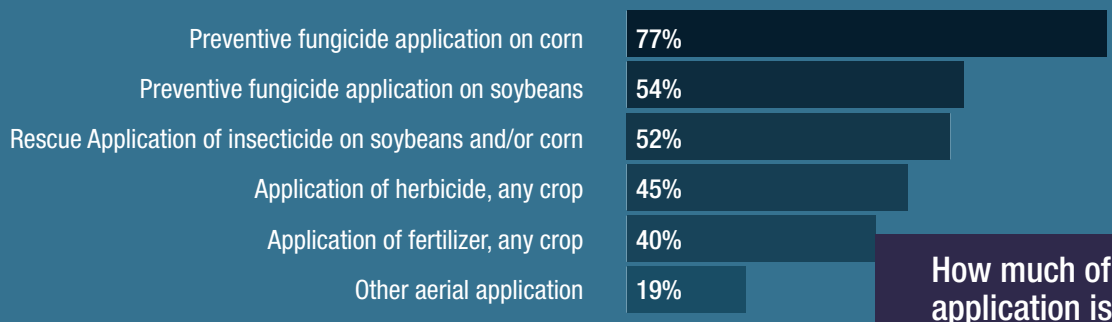
What were the operators' assignments? Fungicides, baby! Preventive fungicide application on corn was number one with 77% of the retailers saying they did this work for customers. Fifty-four percent made preventive fungicide application on soybeans.

But just over half (52%) came in with rescue applications of insecticides on corn and/or soybeans, proving this is still a vital need, even with the widespread use of genetically engineered crops.

Apart from the buzz about fungicides, aerial is also important in herbicide application as well, with 45% of dealers saying they used it on a variety of crops. Then, too, ag airplanes put down a considerable amount of fertilizer—41% of companies told us they did this service for growers, a good portion perhaps going on rice fields in the South.

In our discussions with aerial experts and pilots for this report, one thing that frustrated operators was how retailers and growers don't plan well enough for applications. Tony Goede, aerial manager at BASF Corp., estimates a whopping 70% of work is "last minute," scheduled within a week or two of the need. Retailers in our survey (82%) said they do plan as much as possible but rely on rescue applications as well. Almost 10% admitted they "rarely" plan aerial work and count more on rescues. In fact, 8% said they only use aerial services for rescue applications.

For which services have you employed an aerial application professional?



How much of your use of aerial application is planned vs. rescue?

82% We plan as much as possible but also use for rescue applications

8% We only use aerial services for rescue applications

10% We rely on aerial services primarily for rescue applications

Survey respondents had strikingly positive words about the quality of service they've received from aerial professionals. An impressive 84% say they felt the work was "very good" or "exceptional." The applications were deemed "acceptable" by 12%, and "fair" by 4%. It is a testament to aerial professionals that none of the retailers surveyed rated their work "not acceptable."

POWER OF THE PLANES

While ag aircraft have been evolving into powerful, cutting-edge machines over the past several years, the majority of our surveyed retailers did not seem too concerned about what kind of planes aerial applicators use. When asked if the aircraft type used influences the decision to work with an aerial company, 74% said no. The plane utilized was a deciding factor for 26% of retailers.

Many of today's operators are flying Air Tractor and Thrush aircraft with turbine engines that can cover large stretches of fields quickly—an imperative as treated acreage continue to grow. But single and double piston planes from companies such as Cessna and Pawnee continue to service the industry as well.

A portion of our aerial report this month focuses on whether retailers should contract with an aerial firm or purchase their own planes. Of those we surveyed, 81% do not have an in-house aerial application service, while 19% do.

Our report will show the commitment to building your own aerial segment is absolutely huge. Our surveyed retailers understand that: 61% of them saying they have "no plans" to even consider the move. Four percent did consider the possibility, but decided not to move ahead.

But, alas, the business and scheduling control promised by having your own planes is enticing. Just over 3% of retailers responding said they are seriously considering the investment; 17% have discussed the possibility, and 15% said they have not considered an in-house aerial segment yet, but "may in the future."

SPEAKING OUT

We posed one open-ended question to our surveyed readers: "In a few words, what is the biggest challenge you deal with in working with an aerial application professional?" The number one response was timeliness, followed by reliability/dependability, then by accuracy. Retailers obviously want the job done promptly by committed, trained applicators. We will see in this report how pinpointing grower customers' needs as much as possible in the fall and winter would be a real help in getting work done on time.

The next most important traits our respondents look for in pilots are professionalism and honesty. The pilots we talked with are committed to both. For survey respondents, professionalism is evidenced in part by being "clean and neat (that way I know he cares)" and "not a showman" or not "crazy." Retailers also valued a partnering relationship with aerial applicators that are "transparent, easy to do business with," and offer "good communication." As we will see, building relationships via regular and honest communication goes far in getting jobs done right.

Perhaps surprisingly, experience and equipment were not widely mentioned as challenges for respondents—though accuracy could certainly be a sign of experience. It seems retailers trust the skills and planes most of today's pilots possess, but the aerial operators we interviewed highly encouraged retailers to do research on both. ■

Lisa Heacox is a Contributing Editor for the CropLife Media Group, which includes CropLife and CropLife IRON magazines, and the PrecisionAg Special Reports.

WHAT'S A "HULL" VALUE?

BY DOUG DAVIDSON
NAAA INSURANCE COMMITTEE

Sometimes it's interesting to discover exactly where certain terms originate. In 1688 Edward Lloyd opened a coffee house in London, encouraging a clientele of ship captains, merchants and ship owners—earning him a reputation for trustworthy shipping news. Lloyd's coffee house became recognized as the place for obtaining marine insurance.[1] These ship owners often purchased *"hull insurance"* to protect their ships against the sometimes overwhelming odds of being lost at sea while making their way on the high seas. Today, in aviation insurance, we use the term *"hull coverage"* to refer to the portion of the policy that protects against physical damage to the aircraft itself.

1 http://www.lloyds.com

NO. 1 ON THE CHECKLIST

In a very challenging and competitive ag economy, buyers may become so distracted with saving premium dollars and obtaining lower deductibles that more important items are overlooked. One of these items is the *stated value* of your aircraft hull. Remember, when you set that value, you are, in essence, pricing your aircraft to the insurance company. Certainly, you are establishing the basis by which your hull claim will be settled. A good rule of thumb is to decide at what price you would agree to sell your aircraft. With proper substantiation, this value is likely to be readily accepted by the underwriter.

When a hull loss occurs, although negations and concessions may come into play, only two basic options belong to the insurance company—fix it or total it. In most instances *"total"* means the insurance company pays you the insured value and retains the aircraft salvage. Therefore, it's important to research the value of your aircraft very carefully with every means available. That may present more of a challenge to those of us in the ag industry than to the owner of a Cessna 150. Due to numerous ag aircraft conversions, modifications and powerplant options, detailed documentation may be necessary to satisfy a diligent underwriter.

Resist both the urge to under-insure or over-insure your aircraft for a variety of reasons. Under-insuring could result in the insurance company totaling your minimally damaged aircraft for the stated value. Over-insuring could render your substantially damaged, and otherwise totaled, aircraft repairable and down for a lengthy period of time. Over-insuring also means spending unnecessary premium dollars.

DEDUCTIBLES

In today's relatively small ag insurance market, collecting adequate premiums to pay losses has taken priority over offering lower premiums for high deductibles. In other words, requesting higher deductibles rarely causes a reciprocal lowering of premium. Deductibles instead seem to be used more as an underwriting tool to allow an underwriter to stay on an otherwise marginal risk, or to allow an underwriter to "break in" a new pilot.

Hull coverage may be purchased for *"not-in-motion"* exposures alone, or for *"all risk,"* which includes coverage for both *"not-in-motion"* and *"in-motion"* risks. Deductibles are specified for both *"in-motion"* and *"not-in-motion"* exposures. Although each policy will clarify, an aircraft is usually considered to be *"in-motion"* once the engine is started.

DEFINITION OF AIRCRAFT

Remember that every policy specifically defines exactly what is being insured under *"hull coverage."* You may not intend for that newly installed GPS unit to go to the insurance company with the salvage, but unless it has specifically been excluded from the *definition of aircraft*, it is as much a part of the aircraft as the horizontal stabilizer and will be included as salvage if the aircraft is totaled.

REPLACEMENT PARTS

Aviation insurance policies will consider your engine, or any other aircraft component for that matter, insured even if it has been removed from the aircraft, as long as it has not been replaced by a similar aircraft component. That means if you take an engine off and send it to an overhaul facility, it's still insured under the hull portion of your policy. However, if you replace it with a spare engine, the spare becomes part of the insured aircraft by definition and the original engine is no longer insured!

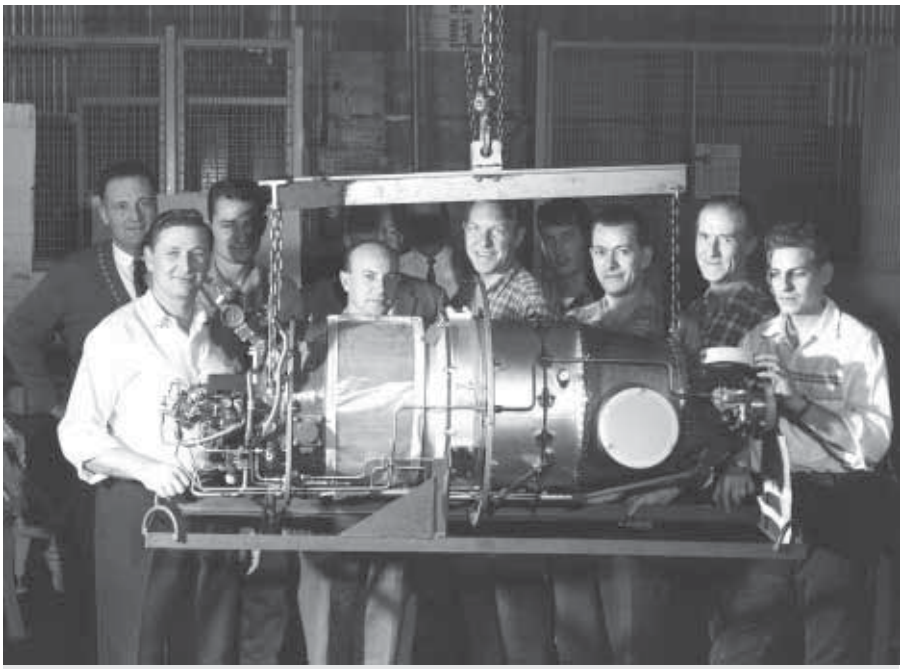
SUMMARY

Spend time reviewing your aircraft hull value(s) and your ag insurance policy. Consult your insurance agent about any areas of question or concern. ■

Article provided courtesy of Pratt & Whitney Canada's generous support of NAAA.

PT6A CELEBRATES GOLDEN ACHIEVEMENT

'Getting it Right'



A group of PT6 shop workers gather around the first production PT6. Pratt & Whitney Canada's first production engine shipped to Beech on Dec. 22, 1963.

WHEN THE ENGINEERS AT PRATT & WHITNEY CANADA (P&WC) convened 50 years ago this December to witness the delivery of the first production engine of their turboprop brainchild—the PT6—they must have felt collective pride in having "gotten it right"; the engine would go on to perform as beautifully as they had intended. What they likely didn't realize at the time was that the PT6 would draw a deep and enduring line in the sand of the global aviation industry: "getting it right" would be the PT6's hallmark for the next half a century. Today, the engine still performs like no other.

Denis Parisien, Vice President, General Aviation, P&WC, says a "cultural bias" within P&WC has kept every iteration of the engine over the years fresh, with a constant grasp on what emerging technology has to offer and what operators require. The ag community has been front and center as the PT6 story has unfolded over the years. Numerous popular ag aircraft manufactured by industry stalwarts such as Air Tractor and Thrush Aircraft are powered by the PT6A.

"We are talking so much more than propulsion technology when we speak of the PT6," he says. "There is an emotional aspect as well—the engine means that much to P&WC employees, and more importantly, it means that much to the operators of the 50,000 PT6s flying today."

To the uninitiated there are some subtle nuances in the PT6 brand nomenclature. The delivery of P&WC's first production engine on Dec. 22, 1963, was a PT6, then a highly innovative gasoline turbine engine that was a significant technology step up from the traditional piston configuration. The phenomenal growth and popularity of the PT6 turboprop engine has been built on that original model. But it has also spawned a family of turboshaft engines for the helicopter market that bears the same pedigree. These turboshaft engines, produced in families known as PT6T, PT6C and PT6B, have furthered the legend of the original turboprop.

As of today, the PT6 family of engines has recorded an astounding 382 million hours in the air.

Parisien says the company has heard of at least one operator who has flown around the world in a single-engine aircraft powered by a PT6, landing in 50 countries in 70 days. That's how you define trust. Or, he recounts, an operator flying a PT6 engine into Antarctic darkness

Fifty years after the first PT6 engine, 50,000 PT6s are in operation today.

at minus 75 degrees Celsius while another flies over wildfires at 300 degrees Celsius. That's versatility.

And how does one define dependability? For Parisien, that too is found in the numbers and in the power of being 50 years in flight.

"Today's basic In-Flight Shutdown (IFSD) rate is one event per one million hours of flight," he says. "The PT6A performs 10 times better than the industry standard."

PT6A reliability rates are such that it enables the aircraft it powers to be certified for single-engine IFR (Instrumental Flight Rules) representing the genesis of the single-engine turboprop market.

"Getting it right" when it comes to the PT6 engine also means starting—and running—in virtually any type of environment. The engine's simple and effective hydro-mechanical control accurately modulates the fuel to ensure consistent engine starts—without the assistance of an electronic control—in an unmatched range of external conditions.

And how long does Parisien see the PT6 engine program enduring? "Really, there's no limit. Developing new technologies and making sure the right pipeline of products is ready to meet customer demand are at the very heart of our business. It's a philosophy that's driven the success of the PT6 and it's going to continue to power us into the future."

And at the same time, "getting it right" for a whole new generation in aviation. ■

Telling the PT6 Story: It Takes a Nation

Creating a social media presence for one of the general aviation industry's most storied engines—Pratt & Whitney Canada's PT6 which celebrates its 50th anniversary in December 2013—was a bold step that took many by surprise. It likely wouldn't work for a lot of aircraft engines. But then again, the PT6 is no ordinary engine. It quickly won a large social media following.

"We are fond of pointing out that the technology that drives today's PT6 engine is as dynamic and industry leading as was the technology that powered our first PT6 into flight," says Nicholas Kanellias, General Manager, Sales & Marketing, General Aviation. "So it's only fitting that we brought the point home when we put the engine in the social media sphere where new technologies and concepts are allowing people to come together in ways never before possible."

PT6Nation.com was launched in November of 2010 and has won a number of awards, including first place for "Best Use of Social Media" in the Flight Global "Webbie" awards. Flight Global said P&WC had "stepped outside the boundaries of the established networks such as Facebook and Twitter [and] harnessed their integration."

PT6NATION SOCIAL MEDIA ECOSYSTEM

(as of December 2012)

2,050 registered PT6Nation citizens

23,000 Facebook fans

6,850 Twitter followers

The PT6Nation has become a community of PT6 operators, pilots and fans brought together to tell the story of the legendary engine, whether on the PT6Nation.com microsite, Facebook, Twitter or YouTube. Users tell their stories either in written format or they can post photos and videos to connect with others in a like-minded community.

A recent advertising campaign featuring four die-hard PT6 "fans," including Stan Jones, a second-generation ag pilot, is driving even more traffic to the website. "Given the 'human interest' appeal of the ads, they have proven highly effective with click-through rates tracking well above industry norms," notes Kanellias. ■

Welcome to New Members

As of December 10, 2012

AFFILIATED ALLIED

Paul Kolterman
United Suppliers Inc.
Norfolk NE

Bryant Otto
M M Satterfield
Aviation Fuels
Conway, AR

ARAFFILIATED OPERATOR

Jay Gilbreath
Hutcherson Flying Service
Forest City, AR

AL-SUPPORT #2

Tyler Speed
Electronics International Inc.
Bend, OR

AL-CHEMICAL #2

Mark Bishop
Cheminova Inc.
Research Triangle Park, NC

AL-SUPPORT #1

Tom Ashenfelter
ASI Jet
Eden Prairie, MN

AL-SUPPORT #1

Robert Smedley
Pro Turbine Inc.
Hot Springs, AR

ASSOCIATE

Gerald Abbott
Abbott Aero Service
Georgetown, DE

Robert "Bob" Black
Fort Worth, TX

Bil Carver
R & R Flight Service
Mendota, IL

Cole Correia
Farm Air Flying Service
Pleasant Grove, CA

Lowel Hinchee
Salina, KS

Brad Lauderdale
Lauderdale Aerial Spraying
Coldwell, TX

Ear Malpass
North Pole, AK

Kevin Morgan
Ethel, AR

Ethan Putsch
Delaware, OH

Ted Rogers
Fort Collins, CO

Lawrence Rolfs
Las Vegas, NV

Guenter Schulz
Snyder Spraying Service
Snyder, OK

Frank Sturgeon
Farmers Spraying Service
Haviland, KS

Richard Watts
K & P Flying Service Inc.
Watson, AR

David White
Edmond, OK

Dave Williams
Kash Helicopter Services
Mt. Vernon, IL

Jon Witrado
American West Aviation
Five Points, CA

INTERNATIONAL

Francesco Macconi
AVIALSA T-35
Lake Zurich, IL

James Pottage
Provincial Airways
Moose Jaw, SK
Canada

OPERATOR

Frankie Amen
Frankie's Aerial Application
Nampa, ID

Mike Kash
Kash Helicopter Services
Belle River, IL

Kenneth Lauderdale
Lauderdale Aerial Spraying
Coldwell, TX

Frederick Leman
Earlybird Aerial Services
Goodfield, IL

Mark Noe
Noe Aviation LLC
Vinton, IA

Wade Porter
P M Dusters
Durham, CA

Mike Ramsower
RAMAIR LLC
Nyssa, OR

Kenteon Schegg
Aurora Cooperative
Aurora, NE

PARTICIPATING PILOT

Shane Ohman
Vinton, IA

PILOT

Jeffrey Aukes
Tidwell Flying Service
Story, AR

Curt Bills
B.W. Aerial
Dimmitt, TX

Brooks Bonner
Turner, AR

Douglas Camden
Spring, TX

Mike Carr
Out Law Aviation
Pomeroy, WA

Don Dressen
Farmer's Aerial Applicators
Ontario, OR

Frederick Flynt
Flint River Dusters
Pelham, GA

Kippy Foltyn
Pioneer AgViation Inc.
Lansford, ND

Ryan Gengerke
Stoddard Flying Service
Garrison, ND

Chad Gravesen
Great Plains Aero
Kenmare, ND

Dallas Grimm
Redline Aviation
Sioux City, IL

Michae Hamernik
Clarkson, NE

Ben Harrington
L & P Aviation
Oak Ridge, LA

David Henninger
Bybee Air Service
Nyssa, OR

Gerald Jackson
Gibson Flying Service
West Helena, AR

James Mike Lederman
Gibson Flying Service Inc.
West Helena, AR

Jordan Loewen
Valley Sprayers
Park River, ND

Scott Lowe
Reinbeck, IA

Steve Luedtke
Storm Spraying Service Inc.
Webster City, IA

Michae Matthews
Crop Dusters LLC
Mooresville, NC

Daniel McGarity
McGarity Flying Service LLC
Dexter, MO

David Peterson
Idaho Falls, ID

Don Pruett
Kash Helicopter
Services
Cisne, IL

Greg Rowe
Farmer's Aerial
Applicators
Ontario, OR

Duane Sink
Kash Helicopter
Services LLC
Ewing, IL

Gene Smith
Weldona, CO

Pau Trost
Sky Tractor LLC
Lake Charles, LA

Thomas Wilson
Desert Air Ag
Howe, ID

WNAAA

Ashley Olivier
Oligrow LLC
Delhi, LA

Suzi Palmer
Palmer Flying Service Inc.
Pekin, IL

Joan Shamblin
Burley, ID

Vickie Shanks Jetelina
Farm & Ranch Aerial Service
Wharton, TX

Stephanie Williams
Souther Field Aviation Inc.
Americus, GA

MEMBERSHIP APPLICATION
NATIONAL AGRICULTURAL AVIATION ASSOCIATION

Name: _____ Year (1/1 – 12/31)_____

Company: _____

Street/P.O. Address: _____City, State, ZIP Code/Country: _____

Bus. Phone: _____ Home Phone:_____

Cell Phone: _____ Fax: _____

E-mail: _____ Web site: _____

Spouse:_____

OPERATORS/PILOTS: List State Associations you belong to
OTHER THAN YOUR HOME STATE ASSOCIATION:_____

PILOTS, AFFILIATED OPERATORS/AFFILIATED ALLIED:
List member companies you work for._____

ALLIED INDUSTRY: Indicate your division: __ Airframe __ Application Technology __ Chemical __ Dealer/Parts __ Insurance __ Propulsion __ Support

MEMBERSHIP CATEGORIES: (please select one)

National Agricultural Aviation Association Bylaws require Operator and Pilot members to be members of a state/regional agricultural aviation association or to pay the additional dues for the Participating Operator or Participating Pilot categories.

☐ **Operator**	$500, plus $100 per aircraft for every aircraft over one	Operator of Aerial Application Business (must belong to state/regional Association)
☐ **Extra Aircraft Over One**	$___	$100 per aircraft for every aircraft over one (per Operator)
☐ **Affiliated Operator**	$200	Operator Partner, Stockholder, or Non-Pilot Employee
☐ **Participating Operator**	$1,000, plus $100 per aircraft for every aircraft over one	Operator not belonging to any State/Regional Association
☐ **Extra Aircraft Over One**	$___	$100 per aircraft for every aircraft over one (per Participating Operator)
☐ **Pilot**	$200	Pilot employed by Aerial Application Business (must belong to state/reg. Association)
☐ **Participating Pilot**	$380	Pilot not belonging to any State/Regional Association
☐ **Allied (1–10 employees)**	$500	Any Industrial Organization or Firm closely allied to the Agricultural Aviation Industry
☐ **(11–50 employees)**	$750	
☐ **(51–100 employees)**	$950	
☐ **(101–500 employees)**	$1,100	
☐ **(500+ employees)**	$1,900	
☐ **Affiliated Allied**	$200	Partner, Stockholder, or Employee of an Allied Industry Member
☐ **Associate**	$95	Person interested in promotion of Aerial Application but not active in industry
☐ **International**	$250	Aerial Applicators & Pilots residing outside the USA
☐ **State/Regional Association**	$750	Organization Membership
☐ **WNAAA**	$200	Individual promoting NAAA-WNAAA Objectives

Payment Method: (U.S. Funds only) _____ Check enclosed #_____ or _____ Credit Card

Amount $_____ Card # _____ Security Code____ Exp. Date _____

Signature _____ Name on card _____

Billing Address _____ ZIP Code_____

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 2012 as 19%.** *Agricultural Aviation* subscription ($30 domestic, $45 international) is included in membership dues for all membership categories.

RETURN THIS APPLICATION TO: NAAA, 1440 Duke Street, Alexandria, VA 22314 www.agaviation.org

Or Fax to: 202-546-5726. Questions, call 202-546-5722 or email to information@agaviation.org

Date	City	State	Aircraft Type	N #	Injury	Description of Accident
05/03/12	Cedar Bluffs	NE	AT-301	3166W	None	Fuel Exhaustion
07/27/12	Austin	IN	Bell 47G-2A	652HA	Serious	Boom hit ground while checking GPS
08/01/12	La Salle	CO	G-164A	9822	Minor	Power loss–forced landing
08/02/12	Alexander	NY	PA25-260	6802L	None	Hit power line
08/07/12	Newkirk	OK	S2R	5596X	None	Hit power line
08/29/12	Ralls	TX	AT-301	23960	Minor	Power loss–damaged on forced landing
09/06/12	Lamar	MO	PA-25-235	7655Z	None	Power loss–damaged on forced landing
09/06/12	Brawley	CA	S2R	4020A	Minor	Attempted downwind takeoff–hit ditch
09/21/12	Firebaugh	CA	AT-502	4556S	None	Unable to climb over wire after takeoff
10/17/12	Portales	NM	AT-502B	598LA	None	Hit power line
10/19/12	Edison	GA	G-164B	6670K	Minor	Power loss–damaged on forced landing

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