



**CANADIAN AERIAL
APPLICATORS ASSOCIATION**

NEW HORIZONS

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PRESIDENT'S REPORT Mike Alarie

Over thirty turbine-powered aircraft from Manitoba, Saskatchewan and Alberta departed for Quebec and New Brunswick on the 28th of May. For the next thirty-two days, aerial applicators will engage in a spray program to control spruce budworm – a moth whose caterpillar feeds on coniferous trees. For quite some time, this insect pest has been a destructive fixture to our forests in eastern Canada. A recent study conducted by Laval University states the last major outbreak of spruce budworm that took place between 1970-1990 caused an estimated loss of half a billion cubic meters of wood in the province of Quebec alone. This is roughly the equivalent of 15 years' worth of harvesting.

A number of critical activities are required to implement a successful spray program. Much of these critical activities are administered by SOPFIM whose task is to supervise spray operations that are now well underway. Their objective aims to maintain tree survival, preserve the annual allowable cut and, in some instances, protect wildlife habitat and recreation values. SOPFIM's forestry management program depends on their dedicated staff and the skillsets of personnel including pilots from across the country. As for our pilots, we, along with their families, look forward to their safe return home upon completion of the project.

Over in the west, Yorkton Aircraft recently held an open house to kick off their "Thrush Rush" Canadian Tour. The tour featured a 2017 two-seat version Thrush equipped with an H80 GE turbine engine, a four-blade propeller, a Canadian registration and yes, even a test pilot. A number of pilots were fortunate enough to fly the Thrush 510G and experience the new ride. I hear the performance and handling was impressive. The tour included several stops in Alberta, Saskatchewan and Manitoba.

Moving further west, Dr. Dennis Gardisser of Arkansas

made the trek up to Taber, Alberta in early May. For several days Dr. Gardisser provided pattern testing, calibration and certification training to representatives from Portage Aircraft Maintenance of Manitoba; Kinniburgh Spray Service Ltd. & Wetaskiwin Aerial Applicators Ltd. of Alberta; and Battlefords Airspray & Provincial Airways of Saskatchewan. These five companies are now fully certified as analysts and may perform pattern and calibration testing on our industry's growing number of aircraft. Thank you Dr. Gardisser!

Finally, I wish to extend a friendly reminder to everyone to fly safely this season. In 2016, two aerial applicators from Saskatchewan had fatal accidents. Both pilots were in their first year of operating a spray plane. Fatalities are rare occurrences in our industry. In fact, CAAA members have an impeccable safety record. These two fatal accidents are a reminder of how steep the learning curve is for pilots with minimal experience.

There will be a number of new pilots and operator startups again this year. I encourage all of them to join their provincial association and the CAAA. Seek out experienced operators and pilots and consider mentorship. Consider your safety and the safety of your personnel as a priority in your workplace. Foster trust and promote accountability to each other. When you make an honest mistake, share the experience with your mentor and educate yourself on how to become better trained by developing the necessary skills to prevent any further mistakes in the future. Simply remember to think safe, work safe, be safe. Have a great season!

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PROVINCIAL REPORTS

ALBERTA

Jason Lazenby

Greetings from Three Hills! The first day of summer has past and the phone is starting to ring, moisture levels in Central Alberta are good and the crops are nearing the time to start spraying Fungicide! I hope this newsletter finds you too busy flying to read and that all your flights are safe ones!

The 4A's have drafted a letter to the government in regards to the Carbon Tax it being imposed in Alberta. Producers are still exempt with their equipment but agricultural airplanes are not, our hope is as voters our voice is heard and some changes can be made to include the fuel we use as well. It is a 2-stage plan that adds just under 6 percent per litre this year and about 7 percent more again next year. With its success in Alberta the next step would be to impose it Federally. The problem the board foresees with this increase is the spread between application costs of ground versus aerial application which could affect our businesses.

Planning for the November 4A's meeting continues as the office works to secure speakers for the event. The AGM will be held in Red Deer once again.

Until next time fly safe and have fun!

SASKATCHEWAN

Colin Bevan

Welcome to the beginnings of a windy spring and start to summer in Saskatchewan. Weather delays caused the completion of harvest and seeding to occur simultaneously in many parts of the province, and further delays in both cases. This may not be entirely a bad thing. The late start to the season may have provided a little extra needed time for many operators to adapt and prepare as their businesses and aircraft fleet may have grown over the winter.

Likely one of the most notable changes so far in 2017 is the increase in aircraft numbers. Many existing operators have added multiple aircraft to their fleets. There also has been an increase in aircraft numbers purchased by farmers and new operators. The Ag sector should be well serviced in Saskatchewan for 2017. Competition will be undoubtedly strong going forward. With the significant increase in aircraft numbers, I would recommend to all aircraft owners, that they communicate regularly and have patience with their aircraft maintenance providers. This group has remained relatively the same size but their workload has largely increased.

One item that operators (particularly ones working from public airports) should be aware of is there will be visits from the Provincial Pesticide Enforcement Officer. The primary purpose is to observe how product storage is being handled on a day to day basis. In a conversation with Mr. K. McDonald, after some research, he has confirmed the A.W.S.A. will allow storage of ag-chemicals overnight on a 1 night basis for weather delays and early morning applications, provided that a work order can be produced, to verify all products are to be applied the following day. Mr. McDonald does caution to keep in mind that individual RM's and airport authorities have the authority to add additional regulations.

From the 2016 season, Mr. McDonald and I discussed the importance of operators doing their best to resolve the various types of complaints that occasionally come up from the public. Even though some of the complainants are often unreasonable, it's important to remember they have access to various types of media that can put a very biased and negative view on the industry as a whole. There is some new info on the SAAA and CAAA websites under the Q & A section that may be helpful when dealing with the difficult people.

One final observation is that between 2016 and 2017, a number of public airports have been offered for sale, making them private, most likely as a way of offloading the responsibility of maintaining paved runways. As I understand it, a number of similar airports in Alberta have offered their lots for sales to help with this financial responsibility while maintaining public access to these airports. In my opinion, this is a much better solution.

I hope everyone has a safe and productive season.

MANITOBA

Dave Frisch

Another spring has passed us by, another crop is planted in the ground and now we are just waiting on the rain here in Manitoba. Some operators and AMO's have also been busy having PVI Audits conducted on their businesses. Portage Aircraft Maintenance was one of those businesses. I will be happy to report that Transport Canada was a pleasure to deal with during their week here. They were courteous, polite, and all and all an asset to have come to our business. There is the general fear in the industry that if they are coming - it is a bad thing, I don't feel that is the case. I feel that increased surveillance can do nothing except increase the safety of our industry.

We are also happy to report that Canada now has several new Operation S.A.F.E Analysts. Early in May, Dr. Dennis Gardisser traveled to Kinniburgh Spray Service Ltd. in Taber, Alberta and conducted an Operation S.A.F.E Analyst Training session. Participants were from Battlefords Airspray, Provincial Airways, Wetaskiwin Aerial, Kinniburgh Spray Services, Portage Aircraft Maintenance, and Jonair. A big thanks to Shaun Kinniburgh for his hospitality in hosting the event. Along

with the training Canada also has the addition of 2 new ACCUPAT String line calibration systems, 2 of only 9 in the world! The ACCUPAT system, matched with the Droplet scan system, paints a very accurate picture of the footprint of your aircraft. One system was purchased by Kinniburgh Spray Services and one by Portage Aircraft Maintenance. This will allow operators more convenient timing to calibrate their aircrafts and allow them to spend more time to make changes to ensure the accuracy of any adjustments.

In closing I would just like to remind everyone to fly safe and be a good example to those that look up to you. Your actions pave the ways to the next generation of Ag-Pilots. Cheers!

ECC
Paul Zimmer

One of the things that makes the aerial application industry so interesting is there are so many variables that we deal with on a daily basis preventing any boredom from setting in. This spring, getting the crops in the ground was somewhat challenging because of the wet spring. Lots of late planting and replanting will push back the fungicide season and in Ontario we can expect an overlap of the agricultural and forestry programs. This usually means the individual Ag grower may not get their corn sprayed as their aerial applicator will have to head north to start their forestry herbicide programs.

In Quebec although not off to a great start on the Budworm Programs the weather appears to be somewhat cooperative and it looks like there is a better chance in 2017 to complete the program. As you may recall in 2016 the program was not completed due to weather related issues. I am happy that we at Zimmer Air were able to play some small part in meeting those goals this year. With an on-time completion this year Western operators can get their equipment home for an on time start of their Ag spraying requirements.

Other small pockets of forest defoliators seem to be increasing with reported infestations from Winnipeg to Montreal and probably further. Heavy infestations of the looper, and tent caterpillar were reported this year in rural and municipal wooded areas. It will be interesting to see if these pests continue to increase in numbers or collapse as is often the case. Unpredictability makes dealing with these pests so difficult and if the infestation is in a municipal setting there is usually little will to take the political risk of calling for, or supporting an aerial response.

What makes our line of work less desirable is dealing with an ever-increasing number of public complaints. It is at times quite demoralizing and at the very least a distraction from the important work we do. I will venture to say there is an outright assault on aerial applicators by the public fueled by negative press, misinformation presented by those that I will just call the "Anti's", and little to no support by our regulators. It doesn't matter where you are working, or what type of application you are carrying out somebody has been harmed, or someone believes we are doing something illegal, or because they were not notified by their neighbor who contracted an aerial applicator, their rights have been violated.

Each one of these complaints gets funneled to the Provincial Environment Ministry for investigation which means we are now spending a great deal of our time addressing frivolous complaints. Although there is no regulation requirement to notify adjoining land owners of an agricultural aerial application the MOE inspector is quick to take the side of the complainant and demand documentation, shape files, etc. Even when the MOE knew who we were, what we were spraying for, and what pesticide was being used they did not defend our legal actions. In the last month one complainant reported we sprayed open water in a Lake Bay. Another man said we sprayed

his property and him standing on his front porch, even though he was not close enough to read the bright orange registration on the side of the helicopter. The btk that he alleged landed on his arm caused a burning sensation, yet he did not seek medical attention. There is no way of knowing the investigation is complete as you never hear back from the MOE, unless you get a call from the enforcement branch which means they are trying to build a case. I find it quite ridiculous that the MOE under the Pesticides Act in Ontario has a full 2 years from the date of the application to lay a charge. It may be another 2 years before you get your day in court.

Fortunately, in the 2 incidents that I have presented I am confident that we carried out our applications in accordance with the Regulations and there is no basis for further investigation or charges being laid. Unfortunately, the complainant walks away with impunity and we don't even get an apology or recognition that we had done nothing wrong. Instead we end up with a couple more pages added to our file that can be used to discredit the pilot and the company should an actual incident occur which can happen over a career in aviation agricultural application.

Have a safe aerial application season and equally important be cognizant of the many ways you can get yourself on the wrong side of your Provincial Environment Ministries and their enforcement branches. Avoid At All Cost!

Keep in Touch!

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Saying NO

by Fred Charleux, Airline Pilot and CEO, Teknowledge

Proficiency in aviation consists of two major parts: the first is written and required by the respective administrations; it is legal and tested during exams. The second part is something that is built, year after year, referred to as experience. Paradoxically, experience is exactly what we are missing and need the most at the beginning of our career as a pilot.

Before elaborating further, let's try to define what is commonly called "Experience". Do we need a certain number of hours to be experienced? At what point in our career can we say that we are experienced? Can we measure experience, and if so, how? Clearly, there are many questions and few answers. Experience seems to be such an abstract word that we would probably get a different definition from every airline pilot in the world.

However, we might agree that there is one definition that does not make any sense, and which must be eradicated from our thoughts as early as possible in our career: experience does not mean surviving! Like anything else that is built piece by piece, experience should begin with a solid foundation.

There is a fundamental flaw in thinking that experience will grow based solely on the number of hours recorded in a log book. Sometimes a non-flown hour will have more of an impact on your experience level than one that has been flown. And that is what experience is all about. I remember getting a job one time because I admitted that I had refused to fly for the previous company that had employed me.

We all know that we have to quickly log as many flight hours as possible, particularly the required 1 500, to be considered by larger operators, and we need to acknowledge the long line-ups to fly a twin-engine aircraft, especially a turbine-powered one, forcing young pilots to push their own limits through necessity. But this could be a negative experience. If the value of those hours could be gauged, the indicator would point to the negative zone. Instead, real experience could be gained through two simple letters: NO.

TSB files are full of cases where pilots have tried to develop their own experience. Even when we understand the risks of saying NO, we must recognize the benefits as well. And, in the end, this is precisely what a major operator would expect you to do. Why, at the beginning of your career, would you do the opposite of what you are supposed to do once you are "experienced"?

In conclusion, it is important to learn how to say NO. Never regret the hours you are turning down, they are not worth it. The real experience is the gain in decision making, situation analysis, self-esteem, risk assessment, refusal, and humility. Surprisingly, a young pilot can accumulate a great deal of experience without having a large number of flight hours. And that is what the serious airline companies are looking for.

There are many reasons to say NO, and despite all the judgmental comments you may hear, they are all good. The flights you turn down, and the rationale behind your decisions, should be considered in the hiring process or interview of any conscientious company.

8 Energy Boosting Foods

by Alyssa Jung Reprinted from Reader's digest

Lemon water

The simplest way to get a boost, ever! Adding lemon to water transforms regular H2O into a natural energy drink that is packed with electrolytes, which are critical for cells to produce energy. Hydration in general is key for a mood boost; a 2012 study found that people who were mildly dehydrated reported feeling fatigued.

Fresh Fruit

The natural sugar in fruit provides a quick pick-me-up when you're dragging and helps keep blood sugar levels steady because it's packed with fiber. Make an energizing breakfast smoothie with blueberries (helps you focus), strawberries (high in vitamin C, which helps turn fat to energy) and yogurt (rich in magnesium, which helps regulate

the release of energy). Or toss in a tropical fruit like pineapple, which contains iodine to help control how quickly your body burns energy. Not a smoothie person? Fruits with peels, like bananas or apples, are good choices to take to work or when you're on the go.

Nuts

Cashews, almonds, and hazelnuts are high in magnesium, which plays a key role in converting sugar to energy. They're also filled with fiber to keep your blood sugar levels even and protein to stave off hunger. Keep a bag of mixed nuts or trail mix in your purse or desk drawer to stay energetic all day.

Dark chocolate

Nibbling a square of dark chocolate as a post-lunch dessert is good for you. It contains the natural stimulant theobromine, similar to caffeine, which boosts your energy and your mood.

Whole-grain toast

Carbohydrates provide 60 percent of the energy required to make your body go, and whole grains are packed with complex carbs (the good kind!), which are full of vitamins and minerals. Eating whole grains can prevent a surge in blood sugar after your next meal, according to a study in the *Journal of Nutrition and Metabolism*, which means fewer energy crashes than when you eat refined carbohydrates in sugary or heavily processed snacks. Start your day with oatmeal or a high-fiber cereal to stay full until lunch, or snack on whole-grain crackers or granola bars for an afternoon boost.

Cardamom

In Asia, this spice is valued for its ability to increase energy and promote blood flow by expanding small blood vessels. Choose curry for dinner, or sip a cup of chai tea to beat the afternoon slump.

Asparagus

This green veggie is high in B vitamins, which naturally support healthy energy levels by turning food (carbs) into fuel (glucose), and it contains plenty of blood sugar-steadying fiber. If it's in season, add asparagus to your salad at lunch to help get you through the afternoon.

Sauerkraut

Raw sauerkraut isn't just a good match for bratwurst; it also helps you maintain energy. The fermented cabbage is high in probiotics, which makes your gut digest food more efficiently. So, since the body has to work less to digest, you're left with more energy. Kimchi, the spicy fermented cabbage popular in Korean cuisine, also does the trick. Craving a street cart hot dog? Top it with sauerkraut for an easy energy boost.

General Aviation Supports Jobs and Communities

New study highlights industry's \$9.3B output to Canada's economy

OTTAWA – Today, the Canadian Owners and Pilots Association (COPA) released a new study that highlights the economic impact General Aviation contributes to Canadian communities and to the national economy. The study, compiled by Vancouver-based InterVISTAS, estimates that General Aviation operations in Canada contributes \$9.3 billion in economic output nationally and accounts for almost 36,000 full time jobs in communities across the country. The report also highlights the benefits that General Aviation operations bring to communities in terms of tax revenues, direct, and indirect employment.

“This study shows the real importance of maintaining the General Aviation infrastructure in communities across Canada, including local airports,” said Bernard Gervais, President and CEO of COPA. “General Aviation is a critical element of the transportation network and one that helps connect communities and create jobs and opportunities for Canadians. COPA looks forward to continuing to work with communities across Canada to realize the impact that the industry has in their regions.”

General Aviation (GA) describes all civil aviation operations that are not scheduled air services, or unscheduled air services for hire. The most common GA activities include private aviation, business aviation, agricultural aviation and flight training. According to recent estimates by the International Council of Aircraft Owner and Pilot Associations (IAOPA), there are more than 350,000 aircraft

and 700,000 pilots worldwide who participate in the global GA community on an annual basis. In comparison, commercial aviation accounts for only 60,000 aircraft and 400,000 pilots. This demonstrates the vast size and significance of the GA sector, worldwide.

COPA represents over 17,000 pilots and aircraft owners across the country and is the national voice for General Aviation in Canada. Through the mission of advancing, promoting, and preserving the Canadian Freedom to Fly, COPA is at the forefront on issues that affect pilots, aircraft and airports in communities across Canada and is an active partner with all levels of government in ensuring a bright future for General Aviation. For more information, visit copanational.org.

If you would like more information on the economic impact of General Aviation in Canada, please contact Carter Mann, Manager of Government Affairs and Communications at 613-236-4901 x112 or by email at cmann@copanational.org.

hours. And that is what the serious airline companies are looking for.

There are many reasons to say NO, and despite all the judgmental comments you may hear, they are all good. The flights you turn down, and the rationale behind your decisions, should be considered in the hiring process or interview of any conscientious company.

Top 10 Reasons to Report a Chemical Claim

By Jim Anderson, NAAA Insurance Committee, Agricultural Aviation, Summer 2016

No, David Letterman is not back, but hopefully the headline will grab your attention!

When it comes to certain accidents such as an aircraft accident, auto accident or injury to an employee, it's a "no brainer" in most cases to turn in a notice to your insurance carrier regarding the event.

Chemical losses or potential chemical claims become a sticky subject which leads to the dilemma of:

"To report or not to report?"

As Shakespeare would say, that is the question.

Hopefully these 10 reasons will help clear things up and have you reporting potential drift claims as opposed to letting them go untended.

Timely notice. Most companies require the insured to provide prompt notice of a claim. Simple concept here: if you want the coverage activated, you must tell your insurance company!

Evidence matters. Timely notice allows the insurance company to conduct a prompt investigation which includes, but is not limited to, gathering plant samples, interviewing the farmer/owner/grower, interviewing the pilot involved in the application, interviewing the chemical company consultant and retaining experts as necessary.

Finite window. Certain types of policies (workers' compensation, for example) may have a time limit stipulation for the reporting requirement. Why not just report the loss or accident when it happens and make it a common practice for all losses? Maybe the allegations are nonsense, but let the insurance company sort this out for you.

Time is money. Claims reported promptly usually cost less. That's right! An early investigation usually leads to preservation of the facts and can lead to better defenses or early settlements, which typically dispose of additional claims or additional damages and reduce costs. If your company has the ability to build a case for you, settlements (if any) are generally going to be less.

Prompt reporting helps eliminate fraud. If your insurance company has the ability to build a strong case for you, the less than scrupulous claimants will learn this quickly and take their questionable/fraudulent claims elsewhere. Build a reputation of getting in front of the issue. Early notification of possible fraudulent claims allows your insurer to address these quickly and help you build a reputation within your community that such claims will not be tolerated and will be met with significant investigation and resistance.

Mitigation. In the event damage to property or bodily injury did actually occur, your insurance company will help you mitigate damages. Sometimes we can fund a crop to be fertilized or reseeded if it's early enough in the season. We can sometimes find alternative markets for crops with some damage to reduce the net loss. When someone is hurt, the faster we can get this claimant treated the better. Sometimes during the treatment evidence is discovered that may help mitigate or defend the claim, or outright prove you had nothing to do with the claimant's condition.

Return on your investment. Even though most states require you maintain certain types of insurance (auto, chemical drift, workers' compensation etc.) these policies are also there to protect your business and your future. The longer you delay in reporting a loss, the greater the risk of having a lower return on your investment.

Don't fear the underwriter. Some operators may not turn in a claim in fear that it will increase their insurance premiums. Good underwriters understand that claims happen.

Help us help you! That's a popular line from the Jerry McGuire movie, but this could not hold truer than when it comes to timely notice for all the reasons mentioned above. Good insurance companies embrace their three primary duties to their insureds: 1. Defend the insured. 2. Indemnify or pay the claims due for the insured. 3. Do our best to settle the claims within the policy limits of the insured. After all, this is why you bought the policy in the first place!

Last one! **Nothing good comes from late reporting.** The longer you wait, the more the duty to report the event will weigh on your mind. Most companies today have an email or a claims phone number to report your loss, or contact your broker and they will make the initial notification for you. Just get it done! Notifying your insurer allows you to focus on your business and your insurer to address the claim. You don't have to become involved in attempting to negotiate a resolution to a possible claim while you conduct your business. That's why you buy insurance!

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Canadian Thrush Tour 2017

Submitted by Yorkton Aircraft Service Ltd.

What a rush! Canada you were asking for a Thrush tour and Thrush Aircraft really delivered! Kicking off with an open house at Yorkton Aircraft Saturday May 27 Terry Humphrey demonstrated the performance and stability of these well-made Thrush planes to well over 45 attendees, most of which got rides.

In addition to Thrush Test Pilot Terry Humphrey, Thrush's Quality Manager Kevin Pierce also joined us from the factory. Industry was here too - Robin Lavoie from Pratt & Whitney and Nick Davies of GE helped us start the tour. Two Farm Credit Corp representatives were on hand with their booth and brought us coffee for the day. We just about got one of the FCC reps in the plane for a ride, but unfortunately time ran out. On static display was a 510P dual cockpit, in addition to three 510G dual cockpits and a 510G single cockpit. A terrific meal organized by Allan closed up a very exciting day.

The tour headed out west to points in Southern Saskatchewan and Alberta and then wound down in Manitoba on Wednesday May 31. Terry Humphrey says he lost track on the number of rides given over the days and at least 10 turbine experienced pilots took the airplane for a fly.

The most common comments were around the performance of the plane. Everyone knows Thrush produces a rugged plane but even with all its toughness on board, with full fuel, full 510 gallons and two people on board the plane was always airborne within 2000 feet of takeoff. Demonstrations took place at various elevations and even in the 25+ temps experienced in Manitoba.

Many pilots talked about the plane being lighter on the controls than they anticipated and quite a few attempts were made to stall the plane but this rugged bird refused - she

just wants to fly. Experienced Thrush Pilot Darren Tiede of Strathmore Alberta flew the 2017 model and we asked him what he thought. His response, "it fly's like a solid Thrush."

The demonstration plane was a 2017 510G Dual Cockpit, Dual Control model owned by Prairie Dusters of Birtle Manitoba. This plane is the second 510G in the Prairie Duster fleet. The first plane was purchased in 2015. Special thanks to Randy and Janet Sandstrom for making this tour possible.

This Canadian Tour also brought focus to the important role Canadian Aerial Applicators play in helping to feed the world. This decal featured here was on the tail of the tour plane. This awareness initiative of Thrush Aircraft is in support of the industry it serves. "Ag aviation will not continue to prosper as an industry, long-term, if we don't get more people aware of its benefits – and of its importance to increasing crop yields for farmers around the world," said Payne Hughes, president of Thrush Aircraft. "Population growth combined with economic challenges is putting tremendous pressure on farmers right now to produce more from the ground they have – and ag aviation can help. Coupled with this of course, is the clear fact that we need more pilots to join the industry and make it a career," he continued.

"We learned a long time ago that leaders promote their industry, while others just promote their products" said Eric Rojek, Vice President of Thrush. "The Feed the World campaign has been created to help everyone in our business – from customers to competitors – because it's a story that needs telling. And, if we do it right, we'll help secure the future for an industry that has served all of us well."

Yorkton Aircraft is an appointed dealer for Thrush Aircraft. Since the appointment, 13 new Model 510 planes have been sold into Canada bringing the number of turbo Thrush models in Canada close to 30.



The Enormous Challenge Of Sustainably Feeding An Expanding Population

By Esther Ngumbi, Ph.D. Esther Ngumbi is a postdoctoral researcher at Auburn University in Alabama. She serves as a 2017 Clinton Global Initiative University (CGI U) Mentor for Agriculture, and is a 2015 Food Security New Voices Fellow at the Aspen Institute.

GMOs and biotechnology and have had a positive impact on the sustainability of agriculture in the last 20 years, according to a new study recently released by PG Economics. GMO Answers took a closer look and highlighted the 5 Things to Know about GMOs based on its results. To dig deeper, we asked GMO Answers volunteer expert and agriculture researcher, Esther Ngumbi to provide her perspective on some of the data presented in another report that was recently released by the International Service for the Acquisition of Agri-biotech Applications (ISAAA).

Ngumbi is part of research in agricultural technology that can help mitigate environmental challenges and ensure food security around the world. (Image Credit: Auburn University/ Jeff Etheridge)

According to the United Nations Food and Agriculture Organization (FAO), the world population is expected to reach 9.7 billion by 2050. This presents an enormous challenge and necessitates the need to find sustainable ways to grow food to feed this expanding population.

Just like the challenge is enormous, the solutions and approaches we employ to tackle this challenge and achieve food security must be broad. We must use a wide range of tools and technologies and draw from several approaches including climate smart agriculture practices and the use of biotech crops. At the same time, these tools must be sensitive to our environment.

Indeed, biotech crops grown in over 26 countries have contributed to helping feed the current population and are expected to continue to be part of the solutions humanity can use to help tackle the challenge of feeding an expanding population. According to the global status of commercialized Biotech/GM crops 2016 report, in a period spanning over 20 years, 2 billion hectares of biotech crops have been commercially grown. These crops range from maize to soybeans to cowpeas to potatoes.

But there is more to the planting of biotech crops. The benefits are numerous and include increase in crop yields, which in turn leads to the attainment of food security, conservation of biodiversity, improvement of soil health, reduction in costs associated with agricultural inputs needed to grow crops, reductions in the use of water needed to grow crops and the enhancement of plants' ability to cope with climate change.

Most importantly is that biotech crops can help farmers mitigate the harsh consequences and monetary losses that come with a changing climate. As a result of climate change, droughts, floods and many other weather related disasters have become frequent affecting food production in both in the developed countries and developing countries. These disasters are also accompanied with losses exceeding \$1 billion. For example, in 2016, in the United States, agricultural losses as a result of droughts exceeded \$5.2 billion dollars.

To deal with the drought, farmers in the United States and around the world, including South Africa, have employed a broad array of tools, including the planting of biotech crops such as maize. This biotech maize is modified to tolerate drought. The successes arising from planting crops that have been modified to withstand the harsh consequences of climate change have in turn led to the appreciation of biotech crops and an increase in the total acreage of planted crops.

Unfortunately, apart from South Africa, Burkina Faso, Sudan and a few other African countries, the appreciation for biotech crops and the potential they have to help Africa attain food security, while helping the continent deal with climate-change related disasters such as drought, is yet to be achieved.

Of course, it is easy to understand. The use of biotech crops remains a controversial topic and there are many myths that have been floated around with regards to how unsafe biotech crops are both to humans and to our environment. In addition, many African countries are yet to put in place biosafety and regulatory controls that are needed to ensure all protocols are followed. However, many of these myths are yet to be proven true by science.

Yet, over and over, science continues to prove that biotech crops, once planted, deliver many benefits including improving crop yields and helping crops withstand the consequences of a changing climate. At the same time, the benefits of biotech crops can mean a lot especially to the over 500 million smallholder farmers. These farmers farm on degraded and unproductive soils and are dependent on increasingly erratic rainfall patterns. When crops do grow, they are affected by diseases, pests, and drought. Too often, farmers lack access to critical agricultural inputs like fertilizers that can enhance crop yields.

Benefits brought about by planting biotech crops, including increasing crop yields, would mean that resource poor farmers reap the benefits that come about with planting biotech crops. In South Africa, for example, biotech crops enhanced farm income by \$156 million. And in Burkina Faso, smallholder farmers that planted biotech cotton increased yields by 20 percent with resultant profit increases of \$64 per hectare.

Using Repaired Parts— Making the Right Decision

by Jean-Marc Caron, Associate Director (interim),
Operations, Transport Canada

As an aircraft owner or person in charge of commercial or recreational aircraft maintenance, finances are at the heart of your everyday concerns. The aeronautical sector is not immune to the rising cost of living. In this context, it seems logical to consider a repaired part as a money saving alternative to using a new part; however, it is important to remain vigilant so that monetary considerations do not put safety at risk.

Price variation can be substantial depending on the source of the bid. Still, it can be surprising to see such a difference in price for the same work on a part. For many, the lowest bid is the winning one; especially if the part comes with a maintenance release, such as a Transport Canada (TC) Form One release certificate or a Federal Aviation Administration (FAA) 8130-03 certificate or a similar document issued by a country with whom Canada has an agreement.

From the perspective of the aircraft owner or the person in charge of maintenance, a part that comes with a completed release certificate may appear to meet the requirements set out in Part V, subpart 571 of the Canadian Aviation Regulations (CARs) since the certificate is required for installation. Even if the organization that repaired the part is approved and the accompanying documentation appears to be complete, the fact remains that the aircraft maintenance engineer (AME) or approved maintenance organization (AMO) must inspect

the part and ensure that it conforms to its type design in accordance with CAR 571.13(1)(a).

Is the cheapest bid the best one? Have you done due diligence by remaining unaware of the reason for the price gap? Before ordering this part or permitting installation, would it not be more prudent to demand a list of the work that will be performed and the parts that will need to be replaced? What about ensuring that the manufacturer's instructions—mandatory for continuing airworthiness—were followed during the repair? Is it possible that, to keep costs down, the instructions were only partly followed?

CAR 571.02 sets out the minimum requirements relating to maintenance work conducted on an aeronautical product. It is essential for AMOs to follow the manufacturer's instructions when repairing components, parts, engines, etc. Each manufacturer has its own specific instructions. A repair may require the costly replacement of parts or subassemblies. AMOs cannot decide unilaterally to remain unaware of these requirements.

As an aircraft owner or person responsible for maintenance, it is your responsibility to ensure technical dispatch. While it is understandable to have confidence in the AMO or the AME, do not hesitate to ask questions. The safety of Canada's transportation network is renowned and approved organizations and individuals are subject to oversight by the Department of Transport. The fact remains, however, that aircraft owners must stay vigilant for their own safety as well as for the safety of their clients.

What is encouraging is that around the world, the number of acreage of biotech crops has been increasing. In 2016, for example, global acreage of these crops increased from 179.7 million hectares to 185.1 million hectares. Perhaps, most striking statistic is that of the 26 countries planting biotech crops, 19 were developing countries.

This increasing demand should encourage the countries that are still considering adopting biotech crops.

There is no one perfect solution to solving our global challenges. Therefore, governments, farmers, scientists, non-governmental organizations and all stakeholders in the space of developing sustainable solutions to agriculture should be open minded and accommodative to using the many tools that are available including the use of biotech crops. At the end, it will take a broad array of solutions to eradicate hunger, feed our rapidly expanding population, and tackle the many challenges that come with a changing climate and biotech crops have proven that they can be part of the solution.



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New Operation S.A.F.E. Analysis Gear Comes to Canada

WRK recently sold, delivered, and trained eight analysts and one technician on the latest computer based agricultural aircraft spray pattern characterization equipment and accompanying software. A weeklong familiarization and operational school was conducted at Kinniburgh Spray Service in Taber, Alberta. The school was spread out over several activities including: intensive classroom studies of aerial application systems, optimizing chemical efficacy through application techniques, drift mitigation, equipment and software familiarity, and field application exercises. These systems included WRK's DropletScan™ and Accupatt™ systems. Kinniburgh Spray Service and Portage Aircraft Maintenance had both recently purchased both systems.



Accupatt is the latest iteration of a string collection system, using a fluorescent tracer, to characterize spray deposition patterns. Operation S.A.F.E., *Self-Regulating Application and Flight Efficiency*, analysis systems were initially developed in the early eighties and have gone through multiple iterations – improving accuracy and sensitivity with each. The Accupatt system evolved out of research developments at the USDA/ARS Aerial Research group at College Station, Texas. WRK took the concept developed from this group and developed a commercially available system for both the hardware and software.

The Accupatt system allows users to very accurately measure deposition on a small diameter string stretched out over almost any desired length. Pattern testing on today's agricultural aircraft generally uses a collector, 150 feet long with a minimum of three repetitions to form pattern

shapes and determine optimum swath widths. The pattern shapes are printed allowing analysts to determine optimum nozzle positioning and setup for smooth applications. The accompanying software allows the users to simulate both back-n-forth and racetrack patterns. Coefficient of variation values are calculated for each simulated swath width to provide guidance for the optimum swath width to utilize.

The DropletScan system is used in conjunction to provide a complete droplet spectrum analysis. Values of Vd.1, VMD, Vd.9, estimated GPA (gallons/acre), and % area coverage are all calculated. These numbers are then used to determine optimization for efficacy, environmental stewardship, label and regulatory compliance.

These systems may also be utilized for drift potential evaluations, actual field spray pattern overlap studies, canopy deposition studies, adjuvant impacts on spray patterns, tank





mix droplet and pattern studies, and aircraft type and setup effects – which are just a few of the possibilities.

Upon graduation, these attendees have been recognized in the NAAA program as Operation S.A.F.E. analysts and/or technician. The newly recognized Operation S.A.F.E. analysts will be able to utilize their newly acquired knowledge with the most accurate scientific analysis equipment commercially available to help the Canadian agricultural aviators improve performance. The true beneficiary of this training, equipment and software will be the growers utilizing aerial application services.

These systems are not expected to have much idle time. Both Kinniburgh Spray Service and Portage Aircraft Maintenance have already had or will soon have workshops to put these systems to use. WRK utilized Portage Aircraft Maintenance’s system mid May for a two-day Operation S.A.F.E. workshop at Yorkton Aircraft Service – assisted by Allan and Cheryl Denesowych, Operation S.A.F.E. analysts. Several aircraft participated in this event testing a variety of nozzle and boom configurations, which included: Flat fan, CP11TT, CP09, CP03, ASC, and Micronair.

LIST OF NEWLY APPROVED ANALYSTS IN CANADA

Congratulations to all newly approved Analysts and Technician!

Shaun Kinniburgh – Kinniburgh Spray Service

Jeff Boyd - Kinniburgh Spray Service

Ryan Gidych – Battlefords Airspray

Andrew Brown - Battlefords Airspray

David Frisch – Jonair, Portage Aircraft Maintenance

Reiss Wicklund – Portage Aircraft Maintenance

James Pottage - Provincial Airway

Corey Lange - Wetaskiwin Aerial Applicators Ltd.

Brett Olson (Technician) - Kinniburgh Spray Service



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'It's the future': Small Prairie Village Pins Economic Fortunes on Drones

Foremost, Alta., is home to Canada's only testing range to fly drones beyond line of sight

By Kyle Bakx, CBC News Posted: Jun 06, 2017

When Ken Kultgen looks up in the air, it's not birds or planes that he sees, but the future.

And it comes in the shape of a drone.

"Lots of communities envy where we are at," said Kultgen, the longtime mayor of Foremost, a village of about 500 people located 300 kilometres southeast of Calgary near the U.S. border. His boast speaks volumes for a community that's hardly distinctive in the area, let alone on the prairie.

There's a drone testing range in Quebec, but Foremost is home to Canada's only testing range to fly drones beyond line of sight, which allows an unmanned aircraft to travel a few dozen kilometres, instead of just one or two. Companies using the facility include Ontario-based Drone Delivery Canada, which has signed deals with Staples and NAPA Auto Parts, which are both interested in using new technology to expand their ability to ship products to customers or from one depot to another.

While major Canadian cities grapple with the popularity of recreational drones and the push by companies to fly commercially, a place like Foremost offers something different. Drones can be tested in a massive area on the wide-open prairie, far away from buildings and people.

Foremost is an ideal testing area for flying drones and other unmanned aerial vehicles since the area has such a small population, few trees and receives barely any rain.

While the test range is now up and running, it didn't happen overnight. The idea for a drone testing facility came a decade ago and it's taken a long time to work with governments and regulators to launch the project. Transport Canada only granted the certification to fly beyond line of sight in November.

The stakes are high for the small village, since it could bring much-needed jobs and create a special opportunity that is rarely available in farming communities.

"Right now the options are get into agriculture or get into oil and gas or chemical business," said Kultgen. "With this, it means the young people out of Foremost can go out and get their education in a technical field ... and come back and be working in the community that they grew up in."

Unique operation

Several different industries are embracing drones to do things like inspect oil and gas pipelines, count wildlife, or analyze the health of vegetation. All of those tasks and services are offered by Ventus Geospatial, a Calgary-based company which is now testing its drones in Foremost.

"Before, Transport Canada wanted data from our company to show our equipment could go beyond the line of sight. But it was kind of a catch-22 because there was nowhere we could go legally and fly beyond line of sight to get them the data," said Stephen Myshak, chief executive of the company.

Myshak is hopeful Transport Canada will open up more airspace for his company after seeing the testing results from Foremost.

"Instead of doing a few kilometres for a pipeline inspection, we can do tens or hundreds of kilometres at a time. So it really just makes us more efficient, gives us new opportunities with larger jobs, longer linear projects like pipelines, power lines, and so on," said Myshak.

So far, companies from within Canada have used the Foremost range, although there is interest from abroad.

"We've had conversations with companies from the U.S. and other places, Europe too. We haven't had them come yet, but it's only a matter of time," said Doug Hanna, who manages the village-owned facility.

'We're just getting going now'

The project is the brainchild of Sterling Cripps, a former member of the military who now operates his own drone training company, Canadian Unmanned Inc.

"I'm delighted. It's very gratifying to see a project mature and come into itself. And we're not there yet. We're just getting going now," said Cripps.

Around the world there's only about three or four sites of equivalent size, scale and accessibility, said Cripps — and some of that testing is done over salt water, which isn't ideal because it's difficult to retrieve a drone if it goes down.

That's why he describes the facility in Foremost, a town with one bank, one hotel and one grocery store, as "very unique" and a "diamond in the rough."

Since the idea for the range was conceived, there's been an explosive growth of drone technology and mainstream sales.

"It's the future, it's coming. We can't avoid it," said Cripps.

Room for growth?

The community hopes to grow the facility, located at the local airport.

Currently, the site shuts down in June and July to not interfere with crop spaying in the region. There's also a need for new equipment, locals say, some of which would allow drones and other aircraft to communicate with each other to avoid any conflict.

Government funding helped launch the facility and there is a proposal to the federal government for additional support.

The mayor of Foremost is devoting many hours to the project, knowing how important it could be to his community. One company is already considering setting up a workspace in the community where the final assembly of drones would be completed and then the devices tested, before being packaged in a crate and shipped elsewhere in the world. That could create a dozen new jobs.

"Thirty people makes quite a bit of difference," he said, "if they have families, to keeping the school open, the grocery store open, all the service businesses that we have in town."

CAAA 2017 BOARD MEETING

The CAAA Board will be holding their Fall Board Meeting in Ottawa on October 18th and 19th. They will be meeting with representatives from the government. If you have concerns you would like the board to address please send your issues to Shauna Prokopchuk at shauna@managewise.ca.

CAIR FALL BOARD MEETING

The CAIR Board will be meeting October 16th in Winnipeg, MB, to review the 2017 season. If you have any issues you wish discussed at the board meeting please contact Jon Bagley at (204) 729-7723 or Shauna Prokopchuk at shauna@managewise.ca.



Putting more food on the table.



Agricultural aviation plays a vital role in increasing the world's food supply – and it's time to spread the word. That's why we're launching the Feeding the World campaign. It's a program designed to build awareness and appreciation for what ag pilots and their aircraft do to bring more food to more tables every day. Those of us in the business may take it for granted – but an increasingly hungry planet simply can't. No matter what you fly, we're proud to support you. Because feeding more folks is a cause well worth flying for.

For more information on the Feeding the World campaign, or to learn more about our aircraft, visit us online – or call Eric Rojek at 229.789.0437.



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BeeConnected Helps Encourage Communication Between Beekeepers and Farmers

It's well understood that honey bee health is complex and honey bees face pressures from a number of factors throughout the year including: pests and parasites like the Varroa mite, harsh weather, disease from bacteria and viruses, a lack of nutritious food sources and potential exposure to pesticides.

Fortunately, according to the 2016 stats from Statistics Canada, honey bee colony numbers continue to increase and are in fact at an all-time high. There were over 750,000 honey bee colonies in Canada and close to 10,000 beekeepers, as of the end of 2016.

"Bees and pesticides are integral and complementary components of sustainable agriculture, so we are very happy to see these numbers increasing," said Pierre Petelle, president and CEO CropLife Canada. "Our industry is proud to be playing a key role to ensure both beekeeping and agriculture continue to co-exist and thrive."

In 2016, CropLife Canada partnered with the Canadian Honey Council to bring BeeConnected to Canada.

BeeConnected is an app that anonymously connects registered farmers, beekeepers and pesticide applicators – free of charge. This allows them to share information about where beehives are located and when pesticide applications will happen, all through the use of a web browser, iPhone or Android device.

"We've heard from a number of groups that communication between all parties could be improved," said Petelle. "The BeeConnected app addresses this issue with an end goal of helping prevent bees from being unintentionally exposed to pesticides."

Getting started with the app is easy. Users simply visit the website (www.beeconnected.ca) or download the app from Apple store or Google Play and create an account right on their smartphone.

Farmers are then notified when a beekeeper logs a bee yard location within five kilometres of their property and beekeepers are notified when any crop activity is logged within five kilometres of their hives. All registered information is kept confidential and users are always anonymous.

Registered users can choose to use BeeConnected's built-in messaging service to coordinate and privately share information with specific users or they can broadcast their message to any relevant users registered within a five kilometre radius of their activity or hive.

Farmers, commercial pesticide applicators and beekeepers can also explore the in-app map to find any nearby activity that could affect them. But beekeepers can't see other beekeepers and farmers and pesticide applicators can't see other farmers and applicators.

Efforts like BeeConnected demonstrate the high level of interest that exists to support honey bees in Canada and to help protect them from inadvertent exposures to agricultural pesticides. Health Canada's Pest Management Regulatory Agency's recent update on Canadian bee incident reports shows these efforts are having a positive impact.

Here are a few highlights:

- The number of beekeepers reporting incidents potentially associated with a pesticide spray application in Canada have been cut in half – there were seven in 2016 and 14 in 2012.

- The number of bee yards with reported incidents potentially associated with corn and soybean planting have decreased by 75 per cent from 2013.

- The number of beekeepers reporting incidents, and the severity, potentially associated with corn and soybean planting are down – there were 37 in 2016 and 89 in 2013.

"The goal of a tool like BeeConnected is to further help by improving communication between farmers and beekeepers about agricultural activity or hive locations with their neighbours," said Petelle.

To learn more about how the app works, head to beeconnected.ca.



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Avoid Temperature Inversions

What is a temperature inversion, and how does it affect drift? There are many misconceptions and erroneous opinions. Without an inversion, or under normal conditions, the temperature is highest near the ground and decreases as the elevation or altitude increases. With a temperature inversion, a warm layer of air is formed at some height above cooler temperatures, thus an inversion layer. This may occur at different altitudes from near the ground to 300 feet above, or maybe more.

Under normal conditions, without a temperature inversion, convection currents disperse the smaller spray particles into the upper atmosphere. If they ever come down, they are so diluted that they have no effect. Under inversion conditions, these smaller droplets are held under the inversion layer and move greater distances than would otherwise occur. In either case, larger droplets fall faster and are deposited closer to the spray release.

Smaller droplets travel farther creating a drift pattern. A temperature inversion's height has an effect on the drift problem. The spray material does not rise up, but instead moves over and comes down again. It keeps drifting with the wind or air movement until dissipated. Droplets do not go through the inversion layer. With or without an inversion, larger droplets fall first and smaller droplets travel further, according to the laws of physics. We can't change the laws of physics, but need to understand and work with them. A temperature inversion simply extends the drift pattern.

Please resurrect and use the research done by or supported by the National Agricultural Aviation Association a few years back. One of the things this study showed was that, if a material drifted over a certain distance, a temperature inversion existed at the time and the height of spray release made no difference.

A misconception is there are no temperature inversions with wind. Temperature inversions can occur at velocities much greater than when we would normally spray. Once, when I was investigating a claim, the pilot told me, "I know temperature inversions and I did not have one. I had a steady wind of five miles per hour, no inversion". He was wrong.

I worked for the State Plant Board of Mississippi from 1955 until about 1965 and was stationed in the Mississippi Delta. Back then, rice growers sprayed amine 2,4-D on rice fields with sprayers mounted on tractors. One of my duties was to trace 2,4-D drift from rice to other crops, primarily cotton. My duty was to find out where a drift came from and where it went. This is where I learned the trade of tracing drift and the effects on non-target crops. The State Plant Board had an office in the Delta Branch Experiment Station office building and I had access to the experts there.

As aerial application came into use, I would look for tractor tracks in rice fields to determine if the application was made by ground or air.

At the time, a pilot could buy a used J-3 Cub for about \$500.00, attach a wind driven spray pump to the landing gear and booms to

the wings, place a 55-gallon drum in the back seat and he was in the spray business. Flying at 60 miles per hour with the nozzles pointed straight back, this made a great 2,4-D airplane.

There was one occasion when I traced 2,4-D drift for as far as six miles, then lost the pattern in another drift pattern coming from a different rice field. There were tractor tracks in the rice fields, so 2,4-D was not applied by aircraft.

Spray materials will drift from ground applications as well as air. A couple of years ago I investigated a case where glyphosate was applied to Roundup-ready cotton by ground with a hooded sprayer. The drift killed milo for nearly a mile, then damaged rice for another 1.5 miles.

Another misconception about temperature inversions is wind direction, which can vary greatly within short distances. Pilots should not rely on wind conditions at the home base when spraying three or four miles away. Once I was traveling west from Indianola, Mississippi on US Highway 82. There was smoke from a cotton gin blowing directly north across the highway. A little further west, smoke from another cotton gin was coming straight south across the highway. A little further west there was a large log pile burning, with the smoke going directly west. All of this was within a three to four-mile radius. Before we had stringent EPA regulations, operators in the Mississippi Delta would burn a used rubber tire at the application site. The pilot could observe the wind direction continuously during the application. However, winds can change drastically during an application. Also, a very hot fire may burn through a low temperature inversion layer making the smoke column inaccurate.

Once droplets leave the nozzle, the applicator has absolutely no control of where they go. Their destination is completely dependent on the laws of physics and gravity. That is why it is imperative to observe all environmental conditions and use this information.

I witnessed firsthand a good example of the effect of a temperature inversion when I worked for the Delta Branch Experiment Station. The station owned an ag aircraft and hired a pilot for it. This was before GPS, so the application had to be flagged manually.

One morning our flag man did not show up and I had to flag the airplane. As the aircraft was headed toward me, I noticed the spray from it was not reaching the cotton. It would come to about three feet above the cotton, then rise up. A temperature inversion had formed three feet above the cotton and would not let the application reach the cotton. I flagged off the pilot and we waited a couple of hours before going back to work. Then, everything worked well.

Above all else, use common sense. If you think the job is risky for a temperature inversion at the time, put it off, or let your competitor get in trouble.

CAIR Contact Information

Keep the following information handy in your CAIR file to assist you during the 2017 spraying season. CAIR inquiries should be directed as follows:

For questions regarding CAIR safety seminar, CAIR videos, meeting information or general inquiries contact:

CAIR
P.O. Box 21085
Edmonton, AB T6R 2V4
Phone: 780-413-0016
Fax: 780-413-0076
Email: info@canadianaerialapplicators.com

For questions regarding insurance coverage, applications and claims contact:

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Phone: 204-943-1441
Fax: 204-957-5561
Email: gpsau@oldfieldkirby.com

The 2017 CAIR Safety Seminar was held in Banff, AB in conjunction with the CAAA Annual Conference and Trade Show. Various topics were discussed including contributing factors to aviation accidents and social media.

The seminar was recorded will be available on the CAAA Website Members Only Page for any pilots who were unable to attend the seminar. If you have any questions, please contact the CAIR Office at 780-413-0016.

For questions regarding financial statements, taxes and payments contact:

Jim Peters
1002 Warsaw Avenue
Winnipeg, MB R3M 1E4
Phone: 204-477-4770
Fax: 204-477-4770
Email: jimpeters@shaw.ca

Canadian Aerial Applicators Association Annual General Meeting and Conference

We're going to Winnipeg!

The Canadian Aerial Applicators Association is proud to announce the 32nd Conference, Annual General Meeting & Trade Show.

Winnipeg Named 'Must-Visit Destination' By Vogue

If you're a prairie dweller on Facebook, you've probably had a few friends share Vogue's article naming Winnipeg and Saskatoon "vaguely exotic, totally obscure, and an absolute must-visit destination."

The piece highlighted Winnipeg favourites such as Lennard Taylor, Clementine, Tiny Feast, the Canadian Museum for Human Rights, the Alt Hotel and Thermëa spa.

Vogue acknowledges Winnipeg's history as a punchline on *The Simpsons* and *The Office*, but encourages readers

to look past the clichés to find "worldly sophistication fused with friendly Prairie sensibility."

Come see what all the fuss is about! Aside from Vogue magazine's highlights the CAAA has an action packed conference planned with exceptional speakers, valuable networking opportunities with both exhibitors and fellow applicators and world class meals and service at the Fairmont Winnipeg.

Special room rates have been negotiated; you can book your room online for the Conference by calling the Fairmont Winnipeg at 1-800-441-1414. Be sure to mention you are a Canadian Aerial Applicators Association delegate.

If you have any questions regarding the AGM or any other conference information please contact Shauna or Tamara at 780-413-0078 or via email at events@canadianaerialapplicators.com.

Six Things You Must Know When Applying Pesticides

Reprinted from AgAir Update

Many of you have just earned continuing certification credits and know the many different things that you need to know when applying pesticides. We agree there are many essential things to know, but we will try to simplify with a list of our top six for safe and effective pesticide applications.

Pick the best pesticides

Sometimes there are multiple options to control a pest problem, and sometimes there are not. When you have multiple effective options, choosing the least expensive and safest product is usually good. Other important considerations are resistance management, persistence in soil or crop and the likelihood of causing drift problems. As an aerial applicator, you are in a great position to get a broad overview as to what pest management treatments are working and advise your customers on their best options.

Follow the label directions

“Follow the label directions” is said so frequently that most of us probably do not hear it anymore. But yes, we always need to read and follow the pesticide label directions. Some of the newly approved labels have much more defined directions for application, adjuvants and pesticide tank-mixtures than we have seen before. Read carefully as the “new rules” are very restrictive and could significantly change your liability. If any application problems arise, you could be held liable and expected to have known and followed all the label directions. The label also gives important information on proper handling, storage and disposal.

Consider environmental conditions

Awareness of weather conditions is critical before any aerial application. High wind speed is always a concern, but lower wind speed is not always better because of the potential for inversions. Buffer zones can become almost irrelevant when winds are calm and there is an inversion. Know what the sensitive crops are and do not spray when the wind is blowing in their direction. Sometimes just saying no is the smartest decision you can make.

Proper sprayer setup

Hopefully, you participated at an Operation S.A.F.E. fly-in recently and your aircraft is set up correctly. Attending these clinics will help ensure a uniform application on the target area. The spray application needs to be fine-tuned to the chemicals being applied. Some pesticide tank-mix partners and ingredients such as oils, fertilizers, and surfactants produce more fine droplets, negatively affecting the spray

pattern and increasing the potential for drift. Growers can detect non-uniform yield patterns with their GPS and yield monitors and may attribute any variations to improper application rather than from problems with what they told you to mix. Many customers have more experience with ground application and its higher spray volumes where what works well at 10 to 20 gal/A may be incompatible at 1 to 5 gal/A.

Nozzle selection, orientation, spacing, spray pressure, height and speed of application are all important spray factors. Sometimes the label specifies these parameters sometimes they specify the end result. If the sprayer setup is not defined, you have the flexibility to use the setup that you have determined to maximize efficacy and minimize drift.

Proper sprayer setup also means proper sprayer maintenance. Be sure to do your routine inspections to check nozzles, seals, filters and other system parts for wear and tear.

Proper sprayer cleanout

The more complex the mixture, the more difficult the residues are to clean out. Some pesticides are also very potent and cleaning them completely out of the spray system can require following strict and time-consuming label directions and the use of tank cleaners. A very small amount of some potent herbicides left on the side of the tank or in a filter can cause significant injury to the next crop. Setting up your spray sequences so you use the same pesticide and treat the same crop consecutively will help prevent crop damage, but it is still always good practice to follow label recommended cleanout practices.

Some experts do not focus on this problem in their training sessions because they know applicators will eventually learn from what is essentially a self-inflicted wound. However, your customers will not view this as self-inflicted and complain.

Pick the best adjuvants

Picking the best adjuvants will not make everyone’s list, but we are adjuvant guys and think it should. If you do not think adjuvants are important, use a bad one. It’s important to pay attention to what works and what doesn’t. The best compliment we hear is when a pilot says, “When your adjuvant is in my tank, I don’t see anything on my windshield.” Good adjuvants give a lot of value for the money by increasing pesticide efficacy, mitigating drift, enhancing retention, reducing evaporation and eliminating application problems.

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Contact Name: Jim Peters

Address: 50 Conner Hill Drive, MB, Canada; Email: pembina.air@gmail.com

Looking for an experienced Ag-Pilot with a minimum of 1000 hours Turbine Time (preferably Garrett engine) for spraying our Morden area from the 1st of May to middle of August 2017. Accommodations provided.

Pay is based on \$60/hr (40 hrs week) Worker compensation provided.

The successful candidate will have: Manitoba Aerial applications license; Speak English; 1000 hrs minimum turbine experience; Good safety record (must be insurable); Valid medical/commercial license

Please send emails to pembina.air@gmail.com

PILOT

Posted by: Brent Pruden; Posted on: 2017-03-13

Email: bpairspray@hotmail.com; Phone: 13062273980

I require 2 qualified commercially licensed professional agricultural aerial applicators for the 2017 spray season. Applicants must have 3 years' experience and a minimum of 500 ag hours experience. Must have excellent working knowledge of bantam gps, accident free record, be proficient in writing and speaking English. Applicants must be able to perform physically in a fast-paced work environment.

Education: Canadian commercial pilots license, Saskatchewan pesticide applicators license.

Duties: To fly fix winged agricultural aircraft safely and efficiently with bantam gps, to work well with customers to create work orders. to work in a professional manner with the support ground crew, to perform daily checks on aircraft being flown. To keep work logs in a orderly fashion and to be available when the conditions are optimum, also to keep a valid Canadian commercial pilots license and provincial pesticide license.

Wages: paid monthly rate is \$75.00 an hour, 40 hours a week, overtime with remuneration, wages based on acres sprayed, acres sprayed in a season depends upon weather and farm economy, workers comp is required by law.

Contact at bpairspray@hotmail.com

SEEKING EXPERIENCED TURBINE AG PILOT

Posted by: Matt Bestland; Posted on: 2017-03-01

Email: matt@bestlandair.com; Phone: 204 735 2258

Bestland Air Ltd - Starbuck MB is seeking professional Ag Pilots to join our expanding business and team for the 2017, 2018 forestry, fire suppression and

EMPLOYMENT (CONT'D)

application seasons. This is a full time seasonal position. Anticipated start date, June 1 2017 thru Sept 1, 2017. Education/Certification requirements; Canadian Commercial Pilots license, MB and SK Aerial Pesticide Applicators license. Applicant requirements; Clean safety and accident record, have a minimum 1000 hours PIC of on type turbine experience on AT802, AT602 or AT502 Air Tractor. Experience in Fire Suppression and Forestry Protection and Ag applications. Excellent operational knowledge of Satloc GPS, Intelliflow systems, and foreflight. Proficient in speaking, reading, and writing English and French, must be insurable through CAIR, ability to maintain journey logs as required by Transport Canada guidelines, safely work with customers and ground support staff in a professional manner. Must have class one medical and valid radio license. \$50/hr based upon a 40/hr week, workers compensation provided. All persons are encouraged to apply, Canadians and those with Landed Immigrant status will be offered a financial relocation incentive to relocate to place of employment. As per Service Canada and Canadian Labor and Immigration, preference will be given to underrepresented groups in Canada, including but not limited to, persons with disabilities, youth, aboriginals, and new immigrants. Bestland Air is an equal opportunity employer, for those interested in working in a professional, safety orientated and organized workplace please send resume with experience and references to matt@bestlandair.com When applying please reference CAAA001 on your correspondence

PROFESSIONAL AG PILOT LOOKING FOR A SEAT – Cap. José Manuel Perez; Country: Costa Rica; Age 44

Costarricense commercial license airplane; United States commercial license helicopter; Camerun commercial license airplane

Hours: Total hours: 6190; Pic: 5953; Crop dusting: 5696; Turbine: 5449

Equipment flow: Cessna 172xp, Navajo PA-325, PA-340, BL-30, PT-17, G-164, B47G3, S2R-T34AG, At-502, At-504

Gps experience on SATLOC G4 and G3, Ag Nav, del Norte

Idiomas: Spanish, English and French.

email: jomapez@hotmail.com

RTS, EQUIPMENT AND SERVICES

TELESCOPIC TOW BARS – New telescopic tow bars for sale 850.00 + gst ea. Please email me for pictures or see them on kijiji.

<http://www.kijiji.ca/v-buy-sell-other/winnipeg/airplane-tow-bars/1256986244?enableSearchNavigationFlag=true>

Email: David Friesen (aerialspray@gmail.com)



QBAS

Queen Bee Air Specialties, Inc.

136 N. Yellowstone Hwy • Rigby, Idaho 83442

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