

# CAREER MOVE: TRAINING IN AG AVIATION PREPARES PILOTS FOR A DIFFERENT KIND OF FLYING

By Mary Lou Jay

Photo courtesy of Fran DeKock, Battleford's Airspray



Instructors and students practice flying over fields.

**W**ith the demand for ag aviation pilots growing, some would-be aerial applicators are looking for formal training in the field. The four schools profiled below — three in the United States and one in Canada — offer a range of classes that can prepare almost anyone from a novice flyer to an experienced commercial pilot for a lucrative and exciting career.

*In regards to the schools below, NAAA does not offer any recommendations. It is suggested that you ask for past students' contact information for the purpose of interviews regarding their experiences at the flight school, along with pilots still working in the industry who graduated from these schools.*

## **Battleford's Airspray**

North Battleford  
Saskatchewan, Canada  
NAAA Member

**Program history/owner:** Owner Fran DeKock has been in the aerial application business since 1980 and has trained many pilots since that time. In 2000, he launched a formal ag aviation training program with the purchase of specific aircraft for that purpose.

**Training offered:** Private and commercial training, float training, and ag aviation training. Ag aviation lessons are offered only from April 1 to June 1 since the instructors still work as ag pilots during the summer months. “We average about eight full courses a year, and we do between 10 and 12 competency or recurrency checks every year for people moving up to larger aircraft or for people that need a little additional training,” said DeKock.

“For GPS, we probably provide as sophisticated a training as you can get because of our forestry background. We work with the most complicated Satloc GPS system that’s available,” said DeKock. “We stress GPS because that’s a tool that allows us to do as close to a perfect job as possible when we spray.”

“We always follow up with the operators that our students are working with and talk with them about where they think we can improve our training,” he adds.

**Students:** Students come from all over the world, including Canada, Australia, New Zealand, France, Italy and Russia. The hangar has living quarters for four students; other stay at a nearby bed and breakfast or live in motor homes at the school. “The cost of living is not very high up here,” said DeKock.

“I can pretty much make an ag pilot out of anybody, but if they don’t have a good attitude, I’m very reluctant,” said DeKock. “Sometimes someone comes in with an arrogant attitude like ‘I already know everything, I just need to do this because I want to get a job.’ Those kind of people are dangerous.”

**Graduation:** “We have standards that students have to attain after certain hours of flying,” said DeKock. Students completing the course get a flight suit and a certificate.

DeKock estimates that about one-third of those he has trained are still flying aerial application. “Some get discouraged; others only took the course to prove they could do it,” he said.

**Cost:** Ag course only, \$15,500 Canadian (approximately \$15,220 U.S.)

**Time required:** Six weeks for ag aviation course, which includes 40 hours of flying time, according to DeKock.

**Planes:** Two seat Piper PA 25; (2) two seat Gippsland GA200s; single seat Piper PA 25

**Safety:** “We spend a significant amount of our time on safety and emergency procedures,” says DeKock, who is the education and safety chair for the Canadian Aerial Applicators Association. “We try and teach people that we’re not putting on an air show when we’re spraying, we’re simply doing a job in as safe a manner as we know how.”

**More information:**  
[www.batairspray.com](http://www.batairspray.com)

### **Flying Tiger Aviation**

Oak Ridge, LA  
NAAA Member

**Program history/owner:** Edwards Barham has been flying his whole life but became involved in ag aviation 10 years ago. That’s when he began teaching instrument training for the University of Louisiana at Monroe’s ag aviation program. When that program ended in 2003, Barham decided to continue it privately with the assistance of long-time ag pilot Robert McCurdy.

**Training offered:** “We offer all classes necessary to go from zero experience to ag pilot,” says Barham. “That includes private license, instrument rating (“not necessary, but we encourage it”), commercial license and ag aviation training. The school provides a basic ag aviation course and a turbine transition course for experienced ag pilots.

“We start with a framework of a program, but since everyone who comes through the door is different we end up modifying that basic program to suit the needs of the student,” said Barham.

The school teaches students the use of GPS and has systems in all their training aircraft.

**Students:** The school now trains about 40 students a year, working with just four or five at a time. They come from all over the United States. A nearby motel offers reduced rates, some

students rent apartments and others stay in campers at the school.

**Graduation:** “We have both written and flying tests that we give students as we go along,” says Barham. Students will also have to pass the licensing test for aerial applicators in the state in which they want to work. “We can’t give those tests, but we can get the study guides and help students study for it,” said Barham.

Barham says about 90 percent of his graduates work in ag aviation. “Sometimes people will change their minds, or get into other kinds of work, but as far as we can tell everyone who wants to be working in ag aviation is doing it,” he said.

**Time required:** Pilots with commercial licenses can complete basic ag training in about three weeks, according to the instructors. The turbine transition course takes three or four days.

Someone with no experience can become a beginning ag pilot in about four months if they’re willing to work at it, Barham says.

**Cost:** Basic ag training is \$9,500; students with no flying experience can expect to spend \$40,000.

**Planes:** Citabrias, to teach flying tail-wheel aircraft, as well as GPS navigation, work patterns and ag turns; dual-control Ag Cat for ag operations and flight training; Pawnee, for students to fly solo at the end of the course; dual-control Turbine Thrush for transition to turbine aircraft.

**Safety:** “Safety is the top issue,” said Barham. “We try to incorporate all of the basics of the PAASS program and attend those programs on a regular basis ourselves because we have to regularly recertify our state licenses.”

**More information:**  
[www.flyingtigersaviation.com/index.html](http://www.flyingtigersaviation.com/index.html)

### **Ag Flight Inc.**

Bainbridge, GA  
NAAA Non-Member

**Program history/owner:** Billy Howell had been an ag pilot for 15 years when he decided to open Ag Flight Inc. in 1984. “There was no place east of the Mississippi River for anybody to get ag aviation training,” he said.

**Training offered:** Everything necessary to take a person with no experience to ag pilot: private ground

school, commercial ground school and ag school, according to Howell. “They leave here with 250 hours and all the certificates they need to go to work,” he said. “Out of the 250 hours, they’ll probably have 200 hours in a tail wheel airplane.” Pilots who already have commercial licenses can take just the ag training.

The ag aviation classes include GPS training. “I just put a \$16,000 guidance system in one of my airplanes. I have GPS in two planes,” says Howell.

“I turned my training syllabus over to the insurance companies years ago, and put two people from two different insurance companies through the ag course without charge,” says Howell. “They came back and said, ‘We’ll insure anybody who goes through the course.’”

**Students:** Working with 40 to 50 students a year (10 or 11 at a time), the school has trained more than 1,400 people from the United States and from 22 different countries. Students can stay for free in the 19-bed dormitory.

**Graduation:** Just as for all pilots, students who need commercial or instrument tickets get the necessary tickets by passing the FAA tests. As far as the ag aviation courses, “We have certain standards that students have to meet,” said Howell. They depend on why the student is here, but often include hours flown.

Not everybody makes it through the program. “Over the last 20 years, I’ve probably given 25 people their money back and told them to go find something else to do. There are some people who just can’t do this,” Howell said. “My instructors have been here so long that they can just ride with somebody and find out if they’re going to be able to do it or not.”

According to Howell, the school has a job placement program and graduates of the ag aviation program are eligible for first year ag pilot insurance. “Ninety-eight percent of the people whom I train get jobs,” he said.

**Time required:** Students with no experience: four to six months, according to Howell. For commercial pilots who want ag training, it takes four to five weeks.

**Cost:** \$48,000 for students with no flying experience; \$17,000 for ag training.

**Planes:** Air Tractors (AT 503 Dual Cockpit and AT 301); a Piper Pawnee; a Supercub.

**Safety:** "We are very safety conscious, and we have safety meetings all the time. We drill in our students' heads, 'Watch what you're doing. Don't get out there and start hot dogging and do things that you ought not to do,'" said Howell.

**More information:**  
www.agflight.com

## **University of Minnesota, Crookston**

Crookston, MN  
NAAA Non-Member

**Program history:** The University of Minnesota offers four aviation degree programs including ag aviation. The ag aviation program has been in existence for many years, according to Mike Vivion, a teaching specialist who took over coordination of the program in 2005.

**Training offered:** Students earn a four-year, bachelor of science degree in

aviation with an emphasis in agriculture. They must take 40 liberal education credits, three credits in computer technology, 29 credits in aviation and an additional 33 credits in agricultural aviation (with a choice of classes like entomology, plant pathology, crop and weed identification and soil science).

The classes will help ag aviators prepare for their role as experts/consultants to farmers, said Vivion. Students can also tailor their courses to focus on ag business or ag system management. "The four-year degree prepares a person better for the job of being a small business person in the agricultural

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## **Merced College, CA, Starts Ag Aviation Program**

In the spring semester of 2008, Merced College in central California introduced a new certificate in agricultural aviation to its curriculum.

To earn an agricultural aviation certificate, Merced students must take classes similar to those required of the state's pest control officials, who are approved to handle restricted materials. These classes involve learning about the different crop protection products and their purposes on crops. "We're trying to put in place some classes specific to application by air," says Doug Thiel, operator of Thiel Air Care in Chowchilla, CA, and an aerial applicator who sits on the advisory board for the ag department at Merced College. Students working toward the certificate in agricultural aviation take classes in subjects such as crops and crop protection products. The credits they earn go toward an associate's degree in agriculture from the college.

The college hopes to coordinate the program with one or more of the flight schools in the area so that students will eventually be able to get ag aviation flight training as well, said Thiel. "This is a work in progress." Merced College's Website is [www.mccd.edu/](http://www.mccd.edu/). *The Agricultural Aviation magazine will have a follow-up on this school's program in the next year or two.*

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industry. And if they change their minds or decide to go in a different direction, they have something else to fall back on," said Vivion.

Flight training is contracted through the University of North Dakota Aerospace Foundation, which is one of the biggest aviation flight training programs in the country.

Students earn commercial certification and chemical training for an applicator's license in Minnesota. The school does not maintain an ag aviation aircraft, but does provide 20 hours over and above commercial training in a tail wheel airplane. Students must do an internship with an operator (for which they receive college credit). The school relies on several different operators each year to provide the additional ag aviation flying training.

**Students:** The program currently has only three students enrolled. Another three are expected to start this year.

Students must meet the basic entrance requirements of the university and need a flight physical before they begin flying lessons. Vivion says they encourage students to get this done as soon as possible. "There can be behavioral issues and medical issues that can stop a student cold," he said.

**Graduation:** Since this is a college degree program, students must pass all of their course credits to graduate from the university. Like all pilots, they must obtain the commercial pilot's license and pesticide applicator license from the state they want to work in.

**Costs:** The yearly tuition and fees for students living off campus is approximately \$10,200. Fees for flight training are additional: private pilot, \$9,202; commercial and instrument aviation, \$7,185; tail wheel training, \$1,731.

**Planes:** Tail wheel training takes place in a 180 Top Cub, which is equipped with a basic GPS system.

**Safety:** UND provides a very safety-oriented flight training program, said Vivion. "We have a lot of oversight by flight instructors throughout the program."

**Additional information:** [www.umcrookston.edu/academics/NatR/](http://www.umcrookston.edu/academics/NatR/)

Aviation/ProgramRequirements.htm#Agri

## Example Pilot Training Schedule

An example of what a potential ag pilot would go through when training with an operator is on page 23. This particular example was provided *courtesy of Paul Gould, Agratech, Inc. in Webbers Falls, OK. It was approved by Mr. Gould's insurance providers as a worthy curriculum to follow for an ag pilot in training*

*making him eligible under his insurance policy.*

In most cases, a potential ag pilot who would learn from an operator who already has a private pilot's license, unlike a school where a non-pilot could begin. Insurance companies require operators to submit a letter and curriculum to the insurance provider, which decides that the course work is a substantive curriculum to build ag aviation experience to insure the new ag pilot. An operator can choose how long each

*continued on page 23*

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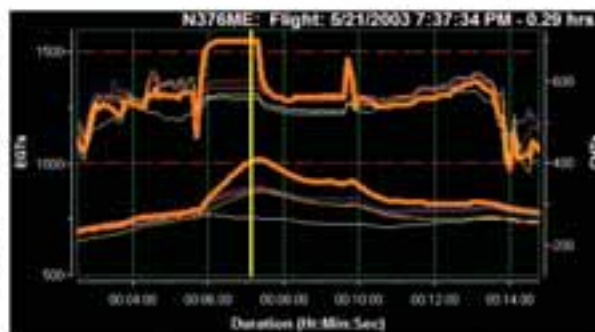


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of these sections will take based on how much experience a potential pilot already has and how quickly they learn on the job.

In addition to this training schedule, operators send a letter to the insurance company giving background information about the potential ag pilot and further explanation of the schedule. The insurance company decides to write a policy for a new pilot based on several factors and no one person is the same. There are several factors including experience, training, tail wheel time, type of aircraft flown, GPS knowledge, memberships in NAAA and the state/regional association, PAASS and Operation S.A.F.E. participation and other examples of professionalism.

### Section 1

#### Ground Training

1. Assist in servicing the aircraft during spraying operations.
2. Learn the correct procedure for handling various pesticide products and safely loading the aircraft.

3. Learn how to calculate the proper amount of pesticide to load into the aircraft and the correct mixing procedure utilizing the product label.
4. Evaluate the aircraft spray system for operations fitness, such as leaking nozzles, hoses, etc., and the corrective actions for each.

### Section 2

#### State Certification

1. Obtain certified applicator license for state for the appropriate categories: aerial, ag plant, etc.

#### Ground Training

1. Travel with aircraft ground crew to support aircraft during spraying operations in surrounding states.
2. Learn to observe different meteorological conditions which determine work to be accomplished. Learn how to make the proper spraying decision based on the current and forecasted weather conditions.
3. Begin learning crop recognition and the crop-sensitive areas.

*continued on page 24*

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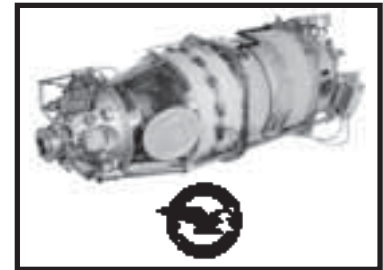
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### Section 3

#### Ground Training

1. Continue ground support of aircraft spraying operations. Evaluate chemical products being used and the proper and improper conditions under which to use these products.

#### Flight Training

1. Begin to learn proper starting procedure, taxiing and ground maneuvering of aircraft (name the type of aircraft).

2. After sufficient knowledge is demonstrated of the aircraft starting procedure and ground maneuvering, trainee may begin flying locally with an empty hopper.
3. After a minimum of 20 hours of empty flight, trainee may begin ferrying empty aircraft to satellite airstrips.
4. After a sufficient number of ferrying flights are completed successfully, trainee may begin to fly with small load (50-75 gallons) consisting

of water only and spraying in the immediate location of the airstrip from a height of 20 feet.

### Section 4

#### Ground Training

1. Continue ground support of aircraft spraying operations.

#### Flight Training

1. Begin to learn the proper use of the Satloc GPS navigation system in aircraft ground training procedures.
2. After sufficient knowledge of GPS system is demonstrated, allow trainee to utilize the Satloc GPS guidance while spraying water over designated areas of the local area at a minimum height of 20 feet.
3. After sufficient knowledge of aircraft and navigation system is demonstrated, allow trainee to spray selected vegetable fields. The (name type of aircraft) will be the aircraft utilized. The fields will be fungicide and/or insecticide applications with careful selection of the fields with minimal obstructions and minimal risk of off-target applications. ✕



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