

## Operation S.A.F.E. Benefits:

1. Reduced risk of drift
2. Improved performance and application accuracy
3. Increased safety
4. Reduced environmental and health concerns
5. Uniform spray pattern
6. Optimal swath determined
7. Correct droplet size
8. Ability to test new equipment for accuracy
9. Solve equipment problems before season starts
10. Demonstration of professionalism to your customers



## Operation S.A.F.E.

*Improving application  
accuracy and increasing  
safety since 1981*

For more information visit the S.A.F.E. website at:

[www.agaviation.org/opsafepage.htm](http://www.agaviation.org/opsafepage.htm)

To schedule an Operation S.A.F.E. fly-in, check the analyst listing and contact an analyst near you.

National Agricultural Aviation Association  
1005 E Street SE  
Washington, DC 20003-2847  
Phone: (202) 546-5722  
[www.agaviation.org](http://www.agaviation.org)



*Self-regulating  
Application and  
Flight Efficiency*

**Administered by:**



# Make sure you and your aircraft are S.A.F.E.



Flight-line equipment used to measure spray pattern

Operation S.A.F.E. is a program designed to help you set your aircraft up to make safe and accurate applications. S.A.F.E. stands for Self-regulating Application and Flight Efficiency. The heart of the program is the S.A.F.E. Fly-In analysis clinic.

At a fly-in pilots can have their aircraft professionally analyzed for pattern uniformity and droplet size. Trained S.A.F.E. Analysts interpret the results of the tests, and recommend changes to improve aircraft performance.

Pilots can then do an immediate follow up test to make sure it is set up correctly.

S.A.F.E. analysts are dedicated to improving application accuracy and reducing the risk of spray drift.



Trained S.A.F.E. analysts calculate spray pattern and droplet size.

While participation in a fly-in is not limited to NAAA members, those pilots who are members will receive an emblem to put on their aircraft signifying their participation in S.A.F.E. and their dedication to making accurate applications.

## Spray Pattern Testing

Special flight line equipment is used to collect a sample of the spray pattern. This collection is usually deposited on a string. Dye added to the spray tank makes this pattern visible to a device called a fluorometer, which measures the amount of dye on the string. Special computer software uses the data from the fluorometer to determine the spray pattern characteristics. Results include a diagram of the spray pattern uniformity, the optimal effective swath width for both race track and back and forth flight paths, and a numerical calculation of pattern uniformity—based on ASAE Standard S386.2 Aug 04.

## Droplet size testing

Water sensitive or Kromecote™ cards are used to sample the spray droplets across the spray pattern. Droplet Scan software is used to analyze these cards, and calculates several valuable statistics used to describe the droplet spectrum produced by the aircraft. These statistics include volume median diameter (VMD), percentage of spray volume contained in droplets smaller than 100 and 200 microns, relative span, estimated GPA, and coverage.

## Scheduling a Fly-In

To schedule a fly-in in your state, contact a certified analyst near you. To find a listing of analysts and their con-



Water sensitive card used to sample spray droplets



Each participant receives a one-on-one consultation with an analyst and hands-on advice for equipment setup.



tact information, visit [www.agaviation.org/opsafepage.htm](http://www.agaviation.org/opsafepage.htm). Also included on the website is additional information on Operation S.A.F.E. , a fly-in clinic schedule, a listing of certified S.A.F.E. pilots, and more details about the benefits of the program.

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