



THIRD ANNUAL  
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 FLY-IN



Fifty companies exhibited for the third annual National Aerial Applicators Conference, Dec. 7-10 in New Orleans. Upper left, perhaps the best pulling power was the wives of Aeromotive International representatives, Sarah Hooker, left, and Linda Steele. Linda's husband, Bill, left and behind the women, is talking with Tom C. Ewing of Valley Flying Service in Mississippi. Upper right, Don Chase of Villisca, Ia., looks over the award-winning booth of Dusters & Sprayers Supply, Inc., Chickasha, Okla. The noon luncheon shows most of the more than 600 attending. Lower right, Tom Campbell, left, Dow Chemical, explains the new particulating agent Norbak (it cuts down on spray drift), to Richard Green of Buckingham, Ia. In the background is Jim Welton, also of Dow.

**S**OME 600 aerial applicators were grounded, but active, in New Orleans four days in December. Their out-of-cockpit mission was to consider together how they might achieve greater "Safety in the Seventies."

Safety is to be pursued at the broadest level of its definition, indicated William Marsh, president of the National Aerial Applicators Association, as he opened the group's third annual conference.

Our aim should be, he said, "to pay more attention to the health and welfare of the general public." This increased effort is desired, "even though there is less contamination of food than 30 years ago."

Aerial applicators already are among the most restricted businesses in the country, said Marsh, coming under—by one count—17 departments and agencies of government. What the housewife must understand, he said, "is that additional

# Aerial Applicators See Increased Safety Indispensable in 70s

restriction on applicators and needed chemicals "could produce a food shortage **now**, not in 10 years."

Flying safety came under review as the systematic development of the conference theme unfolded. Accident records have been good, reported Dale Steward, program chairman, but "the record could be a lot better. Between 1952 and 1968, a total of 5,640 accidents occurred causing 717 fatalities."

What's significant in pointing us in the right direction toward improving the record, he said, is that "76% of the accidents were caused by pilot error and 87% were because of human error."

Failure to maintain flying speed was the greatest cause of accidents, and most often the mishaps came at the procedure turn-around, he said.

"Our experience has been that most of the accidents occur when you get behind schedule for one reason or another during the rush of the season," said Huard Norton, Federal Aviation Administration official out of New Orleans. "Slow down; keep your cool," he advised.

Inadequate pre-flight training, pilot mental attitude, careless handling of pesticides, and improper maintenance also were cited by Norton and other members of the NAAA Safety Advisory Committee as leading causes of accidents.

Panelists George C. Hay of FAA out of Washington, D.C., said that operations procedure help is on the way. An operations manual for aerial applicators, on which nine different government agencies have been working, will be ready by April of 1970.

"In no way is this manual to be considered a directive," stressed Hay. "Rather, we hope it will be a helpful guide."

Disposal of empty pesticide containers needs more careful attention, suggested Dr. J. Blair Bailey of the University of California. A proposal is in the works in his state, he said, to establish disposal points and to classify them in three categories. Class I sites would be for containers that held pesticides either very difficult or impossible to de-contaminate. The sites would be located away from any surface or underground waters. Class II sites would be manned by personnel to help clean containers, to include assistance in chemical de-contamination. Bailey said research is under way in a number of states on high-temperature incinerators. The Class III sites would be for containers most easily cleaned up.

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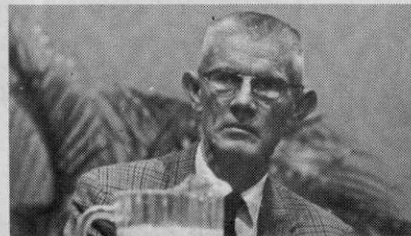
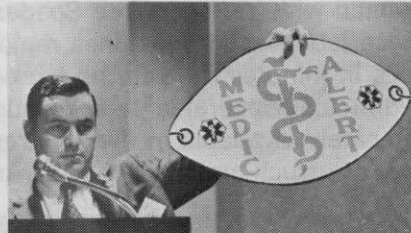
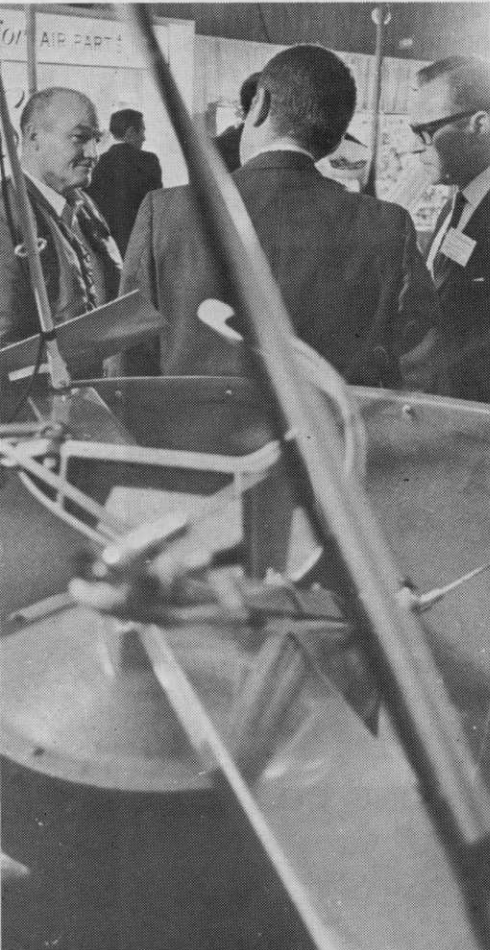
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Melvin Bridgewater of Continental Motors Corp., talks engines with K. Anker, Decca, Houston, Tex. Below, is William Marsch, Litchfield Park, Ariz., outgoing president.



Alfred Hodder displays the emblem of the organization he talked about, Medic-Alert, Inc. In the picture below him is Dale W. Steward, program chairman and winner of the outstanding service award. At left, is the booth of Transland Aircraft, Inc. and you're looking across the top of a Sling King, used for seeding and fertilizing, suspended from a helicopter.

to think about, the pilot must assume some responsibility for assuring that workers in the field are not sprayed, the panel agreed. Perhaps, one panelist suggested, it would be a good idea for customers to understand—or have to agree through terms of the contract—that if pilot had to return to base because of workers in the field, they would be charged for the trip.

Extensive record-keeping might prove advantageous, particularly if trouble developed, it was suggested. Bailey reported that California applicators report monthly on their operations—where, what, how much, why, and what were weather conditions. This policy, he said, perhaps should be considered nationally.

Applicators over-regulated? “You ain’t seen nothin’ yet,” exclaimed Dr. Clifford C. Roan of the University of Arizona. But he chided the collective authors of pesticide labeling laws for lack of common sense. “We wouldn’t have such a container disposal problem if manufacturers were permitted to market pesticides in bulk.”

The constant aerial applicator bugaboo of spray drift can be measured and can be reduced, reported Barry Byrd of Dow Chemical Company. He explained the technique Dow used to determine the effectiveness its registered plastic particulating agent, Norbak. (It looks like liquid corn starch). Among findings, it was learned that drift damage varies from ground-level to 10, 20, 30 and 40 feet above ground.

For the first time in history, man has an edge over insects, observed Ray Morgan of Thompson-Hayward Chemical Co. This achievement has come with the development of pesticides and the numerous methods to apply them. Aerial application has played a significant part. In the past year, he reported, using some 6,000 aircraft and logging more than a million hours in the air, aerial applicators treated 80 million acres. Safe operating practices had to be followed to achieve this mark, he said, and they’ll be vital in improving this performance.

Concerning pesticide container disposal, Morgan said applicators can solve drum de-contaminating by relying on drum reconditioning firms with burning equipment.

“Safety is not luck; you have to work at it,” reminded Huard Norton. In a discussion of safety in flight technique, Norton talked about an FAA program that will begin on a nationwide basis in July designed to make aircraft owners more cognizant of safety. “Gold-coated” FAA

men will be visiting you to give helpful suggestions rather than citing you for violations, he said.

"We have found that in only 9% of general aviation accidents was an FAA law broken."

To reduce the chance of aircraft accidents, Norton suggested:

- provide written operating instructions for all pilots;
- keep aircraft airworthy;
- don't push too hard in the peak of season ("Panic programs can bring accidents.")
- develop among employees an attitude of safety.

A panel of aircraft manufacturers' representatives discussed what improvements "are just around the corner" or are in the near future that would contribute to safer operations. Among predictions:

- continuing advances in metallurgy that will reduce engine wear;
- stronger "cages" for the pilot;
- quicker acceleration to improve the aircraft responsiveness;
- lower-drag dispersing equipment;
- fire retardant coverings for fuel tanks;
- better low-speed stability;
- better cockpit visibility, with filtered air at the least and at the most an air-conditioning system.

Pilots had some suggestions for improvements also. In view of the trend toward more fuel-injection engines, they asked for easier starting. And what about bug and spray deflectors? How about better seats to ease the back problems? Why not add compartments for radios that would reduce contamination and get them out of the way?

Discussions of pilot health closed out the conference, beginning with a report by Alfred Hodder on the nationwide Medic-Alert Program. Medic-Alert keeps a central bank of information on people with hidden diseases and serious allergies. The M-A idea is to "alert" doctors to any unusual health characteristic of an individual in situations where

the patient is unable to communicate the information orally. A typical device is a bracelet that is inscribed with the vital information.

Whether a person wishes to go to the extent of taking advantage of the Medic-Alert program, it is a good idea, suggested Hodder, to carry critical medical information in your billfold as near as possible to your drivers license. It is most likely to be seen in this location, he explained.

Dr. Clifford C. Roan appeared on the program for the second time to relate the research going on in Arizona concerning the effect of pesticides on human health. He is directing one of 15 such community studies under way in the nation.

Dr. Roan and a number of others associated with the project took doses of DDT for 180 days and are compiling data to determine if ill effects develop.

Dr. Roan said that data on more people are needed for the findings to be statistically significant. Research on 84 persons so far indicates that aerial applicators checked showed a build-up of DDT five times greater than the general public. All pesticides considered, aerial applicators registered an index anywhere from 100 to 1,000 higher than the general public.

Whereas Dr. Roan's study is concerned with the long-term effects of pesticides accrued in small amounts, Dr. Paul Smith of FFA discussed his experiences of dealing with the short-term effects of pesticides coming in large doses.

"Make no mistake about it," he warned, get enough parathion and it will kill you."

What's of vital importance, he said, is that "some physician in your area should be made aware of what you are doing and asked to be prepared for an emergency."

Keynoters for two luncheons were Sen. Allen Ellender of Louisiana (see editorial on page 4 for comments) and Dr. John A. King, man-

ager of agricultural research for American Cyanamid Co.

Projecting as did Rachel Carson when she predicted a "silent spring when no birds sing," Dr. King said that unwarranted and wholesale restrictions of pesticides could result in "silent cities."

Farmers no longer would be able to produce food for themselves and 45 other persons, he explained. To produce enough food, great numbers in cities would have to return to the land.

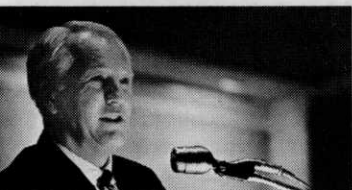
He admitted his staff, who came up with the projection, had exercised "vivid imagination." Nevertheless, some way is needed to dramatize the value of pesticides, he said.

Public attention should be directed from attacks on pesticides to the attack waged by insects and disease. The public needs to know that despite all our efforts, "crop and animal loss attributable to disease, pests and insects amounts to one-fourth of our total yearly production."

Ray Thornton, Cane-Air, Inc., Belle Rose, La., was elected president for the coming year. Elected to serve with him were: Dick Carroll, Crop Care, Alido, Ill., vice-president; Jack Garriott, Garriott Aviation, Bakersfield, Calif., secretary; and Terry Pfeil, Sky Farmer Sprayers, Inc., Waseca, Minn., treasurer.

N-Triple-A's top award, "Agrinaut of the Year," went to Robert A. Phillips, Phillips Aero Ag Co., Ceres, Calif.

Among other awards: Presidential citation—Carl Heimer and Farrell Higbee (NAA executive director); outstanding service—Dale Steward and Bob Ueding; related industries award—Conrad Barlow of Transland Aircraft Company; best exhibit—Dusters and Sprayers Supply, Inc. Plaques for outgoing officers went to President William Marsh, Vice-President L. H. Mills, Secretary Walter Ball, and Treasurer Charles Stone.



John F. Neace, left, Bell Helicopter, performed as the "unofficial" toastmaster for the banquet; George Haddaway, editor of Flight magazine, was the official one. New officers, right, for NAAA are Terry Pfeil, left, Waseca, Minn., treasurer; Ray Thornton, Belle Rose, La., president; and Dick Carroll, Alido, Ill., vice-president. Jack Garriott, elected secretary, was not present.

