



SOUTHERN PLAINS REGION CLOUDTAP CONFERENCE

PROGRAM COMMITTEE

John T. Carr, Jr.
Texas Water Development Board

John W. Gibson
Oklahoma State Dept. of Agriculture

LOCAL ARRANGEMENTS

Charles Taylor
Texas Farmer-Stockman

George Parker
Forrest and Cotton and Texas Water
Conservation Association

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Southern Methodist University

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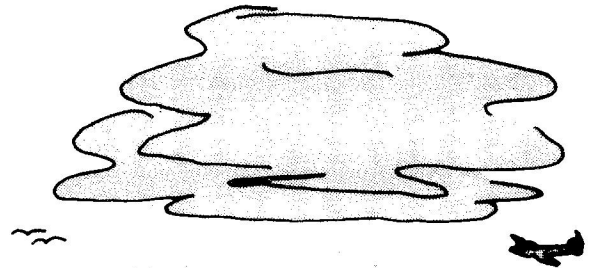
Ferdie J. Deering
Editor and Manager, Farmer-Stockman

Jack Bowen
Texas Water Development Board

Larry Robinson
Oklahoma State Dept. of Agriculture



OCTOBER 16, 1972 · DALLAS, TEXAS



SPONSORED BY

TEXAS WATER DEVELOPMENT BOARD

OKLAHOMA STATE DEPT. OF AGRICULTURE

TEXAS WATER CONSERVATION ASSOCIATION

ALL SESSIONS WILL BE HELD AT ROYAL COACH MOTOR HOTEL
DALLAS, TEXAS

PROGRAM CHRONOLOGY

SESSIONS IN KING ARTHUR I CONFERENCE ROOM

OCTOBER 16, 1972

- 8:30 a.m. Welcome to Dallas—**Hon. Wes Wise**, Mayor, City of Dallas
- 8:40 a.m. Stimulating Clouds to Produce Rain by Seeding From Aircraft in Oklahoma—**Dr. Ray Booker**, Weather Service, Inc., Norman, Oklahoma
- 9:10 a.m. A Hail Suppression Project in Texas—**Thomas J. Henderson**, Atmospherics, Inc., Fresno, California
- 9:40 a.m. Coffee break (courtesy The Farmer-Stockman)
- 9:55 a.m. Seeding Clouds from the Ground in Oklahoma—**Dr. Irving P. Krick**, I. P. Krick Associates, Palm Springs, California
- 10:25 a.m. A Randomized Cloud Seeding Project in Northern New Mexico—**Dr. C. G. Keys, Jr.**, New Mexico State University
- 10:55 a.m. San Angelo Cumulus Project—**Dr. T. B. Smith**, Meteorology Research, Inc., Altadena, California
- 11:25 a.m. Announcements—Reconvene in King Arthur II Conference Room at 11:40 a.m.
- 11:40 a.m. Summary of morning presentations; Potential of Weather Modification as a Supplemental Water Source—**Dr. Horace R. Byers**, Texas A&M University
- 12:10 p.m. Luncheon
- 1:00 p.m. Luncheon address—**Governor David Hall** of Oklahoma
- 1:20 p.m. The Bureau of Reclamation's Current Weather Modification Program and Its Thrust—**Dr. Archie M. Kahan**, Division of Atmospheric Water Resources Management, Bureau of Reclamation
- 1:50 p.m. After lunch break—Reconvene in King Arthur I Conference Room at 2:00 p.m.
- 2:00 p.m. Weather Modification Operations Outside the United States—**Dr. Pierre St. Amand**, Naval Weapons Center, China Lake, California

- 2:30 p.m. The South Dakota Statewide Weather Modification Program—**Merlin C. Williams**, South Dakota Director of Weather Modification
- 3:00 p.m. Feasibility Studies of Precipitation Enhancement in Illinois—**Stanley A. Changnon, Jr.**, Illinois State Water Survey
- 3:20 p.m. Areas of Needed Emphasis to Bring Weather Modification to an Operational State—**Dr. J. Robert Stinson**, Meteorology Research, Inc., Altadena, California
- 3:40 p.m. Hydrologic Implications of the San Angelo Cumulus Project—**Dr. Robert A. Clark**, Texas A&M University
- 4:00 p.m. Closing Remarks—**John Carr**, Texas Water Development Board; **Ferdie J. Deering**, The Farmer-Stockman; **John Gibson**, Oklahoma State Department of Agriculture; **Bill Waddle**, Texas Water Conservation Association



GENERAL INFORMATION

This is the third in a series of conferences on weather modification in the Southern Plains Region. The previous conferences were hosted by Governor David Hall of Oklahoma. The objectives of this conference are to have weather modification project managers discuss weather modification activities currently being carried out in the Southern Plains Region. All sessions will be held at the Royal Coach Inn in Dallas, Texas.

ACCOMMODATIONS

The Royal Coach Inn, 3800 NW Highway West, Dallas, Texas 75220, will hold a block of rooms until October 1, 1972 for those wishing to stay in Dallas. Arrangements should be made directly with the Inn. Rooms for conferees, when the name of the conference is mentioned, will be \$19.00 for single occupancy; \$23.00 for double occupancy (2 double beds).

REGISTRATION

The CLOUDTAP Conference registration desk will be open at the King Arthur I Conference Room at the Royal Coach Inn on Sunday, October 15, from 6 p.m. to 8 p.m., and on Monday, October 16, from 7 a.m. The registration fee is \$10.00 which includes the noon luncheon and a copy of the conference proceedings to be mailed to all registrants after printing.

CLOUDTAP Conference
Dallas, Texas - October 16, 1972

COMMENTS of Ferdie J. Deering, Oklahoma City
Editor and Manager, The Farmer-Stockman Magazines

Drouth is no joke. Farmers lose crops. Ranchers have to sell their herds when stock tanks go dry and pastures burn up. Municipalities sometimes have to ration water to citizens and to industries. Merchants lose business. Pollution problems are intensified. The government has to set up costly drouth relief programs. These problems and losses are results of inadequate rainfall, such as we experience on the Great Plains about every 20 years.

I am in favor of more rain and I am against drouth. I believe that we should do whatever we can to normalize our rainfall patterns, even if we do not yet have the final answers to all aspects of weather modification. We know from reports and papers presented here today that considerable useful and useable knowledge is now available to enhance rainfall. It can be done, it has been done and it is being done.

The 16-member Oklahoma Weather Modification Study Committee, appointed by Governor David Hall, has unanimously recommended that we do more of it. At present, nine locally-financed cloud seeding projects are in operation in Oklahoma, covering more than 5 million acres. Supporting these projects are Oklahoma State University, the City of Lawton, groups of businessmen, farmers, ranchers, and municipal leaders. All projects in Oklahoma utilize ground-based silver iodide generators, except the one experimental project carried on by the government.

Some of the Oklahoma projects provide for continuous year-around operation, while others provide for suspension during wheat harvest

and others during the snow season. All of them may be suspended at any time on direction of the local board. Needs for weather modification vary and for that reason we strongly favor a procedure for local direction, instead of a centralized, remote decision-making institution.

For some 40 years as a working journalist, I have frequently called upon scientists, and research workers, for technical information, including data on crops, livestock, agricultural methods and cloud seeding. Many times I have heard the response: "We don't have the final answer yet!" And other times I have been able to obtain "progress reports" that enabled people who could use the information to move forward toward at least partial solution of the problems under study. The time has come for us to produce a positive "progress report" on weather modification and move ahead toward solving the costly problem of drouth.

I have great respect for science and for those dedicated individuals who are devoting their lives to tedious, repetitive tasks in the hope of finding something exciting that may improve our standards of living or otherwise contribute to the progress of mankind. I have long been a strong supporter of constructive research. On the other hand, I have been quite critical of bureaucratic arrogance and waste of public funds. These attitudes have placed me in a rather controversial position in regard to weather modification, but I see no reason to modify either viewpoint. I am still in favor of more rain and I am still against drouth, and it is my intention to help however I can to bring about relief from the existing drouth. This means to use whatever knowledge is available to increase rainfall in areas where shortages have occurred. Not everybody agrees on that point, but there is a great deal of support for it among the people of Oklahoma and

support is increasing steadily.

Perhaps some of you may feel that we should not engage in operational weather modification efforts until we have measured all possible results in a scientific laboratory. Results should be measured but we should not block utilization with research, important as that may be. Look backward for a moment. Suppose we had refused to accept the practicability of automobiles until mechanics had devised a 4-barrel carburetor for high-powered internal combustion engines and we had built 4-lane paved highways upon which to drive our cars? Or where would aviation be if the government had insisted nobody fly until the jet plane had been invented? Similar ridiculous questions might be raised in virtually every branch of science, with comparable answers. The truth is that about as much has been contributed to our total knowledge from field operations as has come out of the laboratories. We must push forward to use the knowledge we have about weather in field operations and keep on looking for more in the laboratories and in the skies.

The attitude that we should halt operations until research comes up with final and absolute answers on weather modification, if it should prevail, could result in billions of dollars worth of needless losses during the current drouth cycle. Certainly, research should be continued and expanded by additional weather studies that are designed with a positive approach toward solving our problems. We don't need projects designed to demonstrate that man cannot make it rain, nor do we need multi-million dollar boondoggles to help bureaucratic empire-builders prove their prejudices. We need to break the drouth now and we need to take action to keep it broken.

Finally, research should not be given priority over operational

projects in areas where people are suffering from lack of rain.

I sincerely believe that we are on the verge of great advancements in meteorology and particularly in weather modification for increasing and normalizing rainfall. Nevertheless, I have been shocked and dismayed at some of the revelations turned up in my study of scientific reports and other information sources. It is my hope that those of you who are concerned with the problem of drouth and who want to contribute toward its solution will take a new look at what has been done, both in the laboratories and in the field, that you will consider what is being done, and lift your vision to see what might be accomplished. If we wait until some future year to come up with the answers, as has been suggested in the time-tables of certain present and proposed research projects, the drouth might very well end of its own accord. By then, however, many of the people on farms and in small towns will be bankrupt, and our cities may face food and water scarcities this nation has never known before.