

PHYSICS-CHEMISTRY

Rain Making Debated

➤ A CONTROVERSY over the merits of artificial rain making is being generated as Congress gets set to consider a \$50,000,000 appropriation for research on rain making and sea water distillation as two possible methods of replenishing the West's inadequate water resources.

The original rain maker, Dr. Vincent Schaefer, of the General Electric Research Laboratory, Schenectady, N. Y., says that what he has seen in actual experiments in New Mexico, Idaho and Montana, "definitely indicates that the cloud seeding method of producing precipitation should help in the water resources problem of the 17 western states."

On the other hand, Dr. Harry Wexler, chief of the U. S. Weather Bureau's Special Scientific Services Division, says that "it has not been demonstrated that cloud seeding is a factor in producing a significant amount of precipitation and, therefore, it has not been demonstrated that cloud seeding would help in the water resources problem of the West."

Most experts agree that the 17 states of the West, except for the Columbia River Valley, face an increasing water supply problem, brought about by the growth of population and industry in those states.

Dr. Schaefer said he is generally in favor of such measures as the \$50,000,000 water resources bill, introduced by Sen. Joseph C. O'Mahoney of Wyoming, because very careful study and much more basic research is needed before cloud seeding can be counted on to help.

Precipitation occurs, he explained, when nature forms a critical amount of nuclei around which rain drops or snow flakes can form. General Electric research, he said, has shown that in some instances, nature does not produce enough of those nuclei and, therefore, clouds which could produce rain or snow evaporate back into the air.

"What we need to find out," he said, "is how many artificial nuclei we need, when we should use them, where and how often."

In some places in the West, said Dr. Schaefer, very tall clouds are built up. The tops of these clouds change to snow, but this snow is at such a high altitude that it streams off and eventually evaporates.

He said that cloud seeding might well increase the vital snow pack on the mountains of California. There are probably good cloud conditions around the Donner Pass and Soda Springs. He thought, however, that the clouds over Los Angeles would generally not be suitable for rain making.

Dr. Wexler, on the other hand, disputed the results of some of the General Electric experiments. He said that he checked the rainfall in New Mexico during the time cloud-seeding experiments were going on

near Albuquerque. He found that on days when the research team did not seed clouds there was rain over the state, and that also on days when there was seeding there was rain over the state. Dr. Wexler concluded that it is not possible to demonstrate whether cloud seeding helps at all.

Research on rain making was included in the O'Mahoney bill at the suggestion of California Senator Sheridan Downey. Sen. Downey said that Pasadena meteorologist Irving Krick said he could increase rainfall by seeding clouds with silver iodide particles tossed into the sky from ground generators.

Dr. Schaefer pointed out that announcement of the possibility of seeding clouds with silver iodide nuclei from ground generators had been made by General Electric early in 1947.

Science News Letter, January 28, 1950

ENGINEERING-METEOROLOGY

Knowing Climate Will Reduce Building Costs

➤ KNOWING the climate will help reduce building costs in some areas of the country.

Tyler S. Rogers, assistant to the executive vice president of the Owens Corning Fiberglas Corporation, told a conference on weather and the building industry that, with an accurate knowledge of climatic conditions in various areas of the country, it will not always be necessary to use expensive construction materials.

It is not sensible to use, he said, the same building materials in areas where it is arid as would be used where there are 30 inches of rain or six feet of snow.

The Weather Bureau has knowledge to impart to the building industry, Dr. Francis W. Reichelderfer, chief of the bureau, told the conference. He said that the vast amount of weather information, gathered through the years, in the government archives is worth more than all the Klondike's gold.

It is one of the aims of the Weather Bureau, he explained, to provide weather and climate information in a form that is useful to all kinds of industry.

Seven homes are being built in Austin, Texas, to test various kinds of heating and insulating materials, but there'll be nobody home but a bunch of testing instruments. Prof. F. E. Giesecke, told the conference of plans of the University of Texas to conduct research on structures in hot climates.

The experiments will measure heat flow and radiation in the seven homes for about three years.

The conference was conducted jointly

by the Building Research Advisory Board and the National Research Council.

Science News Letter, January 28, 1950

● RADIO

Saturday, February 4, 3:15 p.m., EST

"Adventures in Science" with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. H. T. Dean, Director, National Institute of Dental Research, National Institutes of Health, Bethesda, Md., will talk on "Research for Better Teeth."

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