

Valley Hail Study Dependent On Volunteer Hail Stone Collectors

By JOE COWLEY
Mail Tribune Farm Editor

High atop a hill in the Modoc orchards off Table Rock rd. radar machines whirl as a black mass of anvil shaped clouds pile up over the valley.

A secret radar installation alerted against a possible sneak attack? No. This is the heart of the hail research project co-sponsored by the Medford Pear Shippers and Oregon State college.

Operating with the radar are three moving picture cameras. One set some distance in front of the radar takes a continuous picture of cloud formations as a 100-foot roll of film exposes a frame every ten seconds. Inside the two former U.S. Marine Corps radar machines are movie cameras attached to the viewer scopes which records the pattern made as the electronic fingers of the radar probe through the heart of the thunder storm.

One machine is set to probe into a horizontal slice of the storm cloud mass and the second to probe it vertically. Both machines have their own scopes and cameras.

When is Hail Produced?

Purpose of the local study, now in its second year, is to discover at what step in the thunderstorm hail is produced, according to Dr. Fred W. Decker, Oregon State college meteorologist. He is working with Jud Parsons, Medford orchardist, and local coordinator of the study.

"When people hear the roll of thunder and see the flash of lightning, they think of it as one storm," Dr. Decker explained. "Actually, it is a series of storms which bubble up from the anvil top cloud system. As one rumbles across the sky, another is building up."

As the movie camera out front records the cloud evolutions, a clock with slate indicating the date, records the exact minute of each cloud pattern. These pictures, the recorded radar probes, indentations made by the hail striking the aluminum foil sheets and hail samples are all studied and observations correlated.

Definite Patterns

From these various clues the researchers hope to establish definite points. When they know when the hail occurs in the cloud pattern, then they can get a lead on how the hail is developed and at what point it is easiest and most effective to artificially stop the hail.

Over a period of years hail has caused considerable loss due to pear marking. The pear growers tried "seeding" the clouds with generators sending crystals of silver iodide into the storm cloud formations. Sometimes it was successful and sometimes it wasn't. But it was always expensive. Now they are trying

to find out just what is the best method of weather control on which to spend their money and when such artificial means should be used.

The current research recently received \$30,400 from the National Science Foundation for a two year study in hail research.

Hail Stone Collectors

Heart of the program are the vital volunteer hail stone collectors. These are local citizens who gather the hail stones in cottage cheese cartons, tin cans or other containers and immediately pop them in their deep freeze boxes or refrigerators. This can be anybody who sees the hail stones fall. They are asked to call SPring 3-4088 so the stones may be picked up. The stones are studied as to structure and cross section, so the researchers may learn how they were formed. This, too, is a vital clue in learning how hail develops in storms.

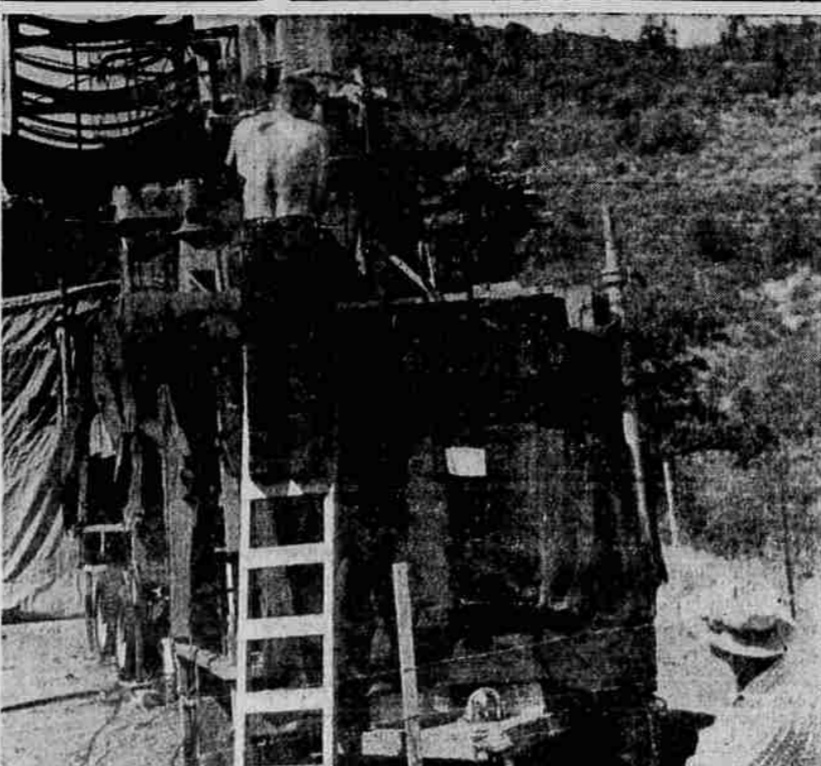
Backing up the hail collectors are 500 hail recorders distributed throughout the valley. These consist of aluminum foil sheets wrapped around a chunk of styrofoam pad for a cushion, and mounted on pear lug boxes. By examining the dents made by

the hard hail stones in the soft foil, researchers can determine the density of the hail storms and, perhaps, even the general size of the hail. They like to know, too, the minute when hail is observed and rely on the hail collectors for this information.

Electric Observations

"We have plans for developing the site (in Modoc orchards) for atmospheric electric observations, too," Dr. Decker said. "We have been taking a plane up and looking at the clouds from aloft with a movie camera. This is an attempt to look at the clouds which might be producing precipitation down in the valley."

Information gathered through this local study could have wide-ranging effects on all weather studies. The forecasters may learn how to forecast where lightning will strike and exactly when. It may even be possible to prevent lightning storms. Instead of orchard heaters a cloud layer of tiny plastic bubbles may be spread over the valley orchards to prevent frost damage. Possible developments from a successful study are limitless, the researchers point out.



CHECKS RADAR—Bob Mathews, Oregon State college undergraduate, is acting as radar technician to keep the two former U.S. Marine Corps radar machines in operation. These two machines were formerly used by the Marine Corps for beachhead operations.

One has been modified as a horizontal scanner and the other scans the sky vertically. Operation of these machines from atop a hill in Modoc orchards gives the researchers valuable data through electronic probing of storm cloud formations.

Low Rent Public Housing Projects Due in Portland

Portland - Sites for two, new, low-rent, public housing projects have been selected, and plans for immediate construction are in final preparation, according to Gene W. Rossman, executive director of the Housing Authority of Portland.

A housing project primarily for elderly persons of low income will be built in the area bounded by NW 19th ave., Everett and Flanders sts. This will feature a 13-story concrete building containing 150 apartments. It will include a special area to be used exclusively for a community service center. In addition to the 13-story structure, there will be an adjacent three-story building for 39 low-income families with pre-school children, and a court yard with play area separating the two buildings.

A second public housing

project will be located within the area bounded by SE Powell, Division, 14th and 26th sts., and will be devoted mainly to the housing of large families of low income. This second project, tentatively titled the "Brooklyn" Project, will be a "scattered sites" development utilizing vacant lots and lots on which standard or unoccupied structures are presently located.

The financing formula of the two projects will involve a relatively small federal subsidy; long-term, low-cost financing in the private bond market; and sponsorship and operation by the Housing Authority of Portland under its cooperation agreement with the City of Portland and its program reservation with the public housing administration, Rossman said.

Estimated cost of these projects, exclusive of land costs, is \$7500 per unit for the northwest apartment project and \$8500 per unit for the Brooklyn project. Both public housing projects will be the first of their respective classifications to be constructed on the Pacific Coast.

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CHECKING CAMERA—Dr. Fred W. Decker, OSC meteorologist, examines the cloud camera during one of his frequent inspection trips to the Rogue valley to check on the research being done in the Rogue valley. Dr. Decker plans to spend most of the winter going over research notes and compiling a report of the program's second year.

O and C Money Used for Roads, Reforestation

Receipts from timber sold during the last fiscal year on the O and C railroad grant lands in the Medford district paid for work on several access roads and bridges, according to bureau of land management officials.

Jackson county will receive \$2,549,345.14 as the net payment after deduction of the county's contribution toward construction of forest access roads and reforestation of cleared forest lands.

Under the agreement with the federal government, the county makes available about one-third of the 75 per cent share of receipts to which they are entitled for road building and reforestation.

In the Medford district these road funds were used last year for work on the Thompson Creek bridge and seven miles of access road construction in the Galice area in Josephine county. Also for construction of the Cantrall bridge and surfacing of 16 miles of the West Fork Evans creek access road in Jackson county. In addition, bids were let late in June for construction of nine miles of road in the Deer creek area of Josephine county.

Reforestation

Reforestation moneys made available by the counties were used in the Medford district during the fiscal year for planting 1,840 acres with tree seedlings, 314 acres with tree seeds and for brush eradication work in preparation for reforestation work on 616 acres.

Total payments to the counties of \$16,258,578.71 are up more than \$1.4 million over a year ago. Both BLM and the forest service topped their previous high timber sales mark with an increase of more than \$4 million over last year's sales. Total forest service timber sales on the half-million O and C acres under its administration grossed \$4,306,625.55. BLM receipts totalled \$28,210,531.86.

U.S. vehicle operators paid a record \$8.5 billion in state and federal highway taxes in 1959.

Durno Reiterates Medical Aid Stand

Santa Clara - Sen. Edwin R. Durno, M.D., Medford, Thursday reiterated his stand in favor of medical aid for the aged. Durno, candidate for Congress from Oregon's 4th district, spoke at a meeting at the Grange hall in this Lane county community.

"As far back as April 16," Durno said, "I proposed a positive, constructive plan for medical aid for our Senior citizens. This plan would call for Federal funds made available with matching State funds to be administered on the basis of need by local agencies at the local level."

The Republican candidate went on to say, "Since I made this proposal, an almost identical plan was incorporated into the Mills Bill which passed the House of Representatives in this year's Congressional session by a vote of 381 to 23, an overwhelming indication of support from Republicans and Democrats alike."

Durno further stated that he was opposed to the Forand bill because it does not cover even a majority of our aging citizens. He said, "It's a real shame that a social and economic problem of this magnitude should become a political football in this election year."

More than 1,700,000 persons own stock in motor vehicles and automotive equipment manufacturing companies.



PHOTOGRAPHING CLOUDS—A movie camera poised atop a hill in the Modoc orchards off Table Rock rd. photographs clouds at 10 second intervals. A 100-foot roll of film ensures a daylight to dark recording of cloud patterns used as part of the local hail research project. A clock and slate show the date and minute each picture is taken. Far below the camera may be seen the rows of pear trees.

Demos Will Name Electors Aug. 20

Portland - OPB - Democratic candidates for presidential electors will be named at a Democratic State Central committee meeting here Aug. 20, according to Robert Straub, state chairman.

Straub said the six electors would be chosen by the central committee. He said they must be certified by the secretary of state by Sept. 8.

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