New Method of Measuring Moisture Used Here

County Agent Sees 'Big Step' Toward Orchard Culture

A "big step" in Jackson county orchard culture is believed to be in the making right now.

In about one year local experiment station officials and county extension agents hope to unveil a new mechanical means of measuring the amount of available moisture in soil.

The method involves burying small disc-like devices in the ground at various depths. The rectangular-shaped "discs" are attached to wires which are long enough to penetrate the soil surface. When an orchardist wants to know when to irrigate, he attaches the wire ends to a battery operated meter. The meter indicates the amount of water his soil contains at the different depths.

20 Are Installed

Approximately 20 of these discs, called "soil moisture wafers," have been installed on an experimental basis in various types of soil in seven Medford area orchards. These include the Ralph Cook, Dunbar Carpenter and Bear Creek home orchards, all containing heavy soil, Oakdale, Hollywood and Alfred Carpenter orchards, containing intermediate soil, and the Rogue River company's Clancy orchard, containing light soil.

Clifford B. Cordy, county horticulture agent, explained that an average of two wafers are installed in each hole. The number of wafer sets installed per orchard depends upon the uniformity of the soil. If the earth texture is heavy in one area and light in another, two sets would be needed, he said. Sometimes more than two are needed and in other instances, where soil type is generally uniform, only one set is necessary.

Spun Glass

The wafers, each measuring about one inch by 1½-inch around and about one- fourth inch thick, consist of spun glass partially encased in metal with the wires attached. Cordy explained that the spun glass absorbs the moisture and, when the meter is connected, the wire and metal casing work together to conduct the moisture reading from the wafer to the meter. The meter shows the moisture content in terms of microamperes. The orchardist interprets this reading according to a chart adapted to his particular type of soil and the season in which the reading is taken.

Before installing the wafers, orchardists at the experiment sites send samples of the soil to Oregon State college laboratories. The soil is analyzed there to determine the amount of water still in the soil at the point where trees wilt from lack of available water.

Varies in Earth

This factor varies in different types of earth so individual tests must be made on samples taken in several parts of the orchard. Information from this analysis is used in interpreting meter readings. This moisture testing service, was started at OSC just last spring.

The next step involves digging a hole in the ground, preferably with a soil auger. Depth of the hole depends upon the lowest point at which the orchardist desires a moisture reading. At the Rogue River company's Clancy orchard, the hole was dug approximately 4½ feet deep. One wafer was buried at that depth, another at 30 inches and another at 15 inches.

As the earth is removed from the hole it is kept in order and returned to the hole in the same order. This is because soil conditions vary at different depths. If surface soil were placed at the bottom of the hole, or if 4½ foot soil were placed on the surface, the reading would not be a true one, Cordy explained.

Post Installed

After the wafers have been planted, a post is installed and the varying lengths of wire are attached to the post. This keeps the wires from becoming buried and the post also serves as a marker.

Cordy said on two of the experiment sites, curious people have seen the wires on the ground and pulled on them. "The wires came up but they became detached from the wafers. We had to start all over again and plant new wafers." Now orchardists are urged to explain the experiment to employees before the employees try to find out about it on their own.

Meter readings are made weekly at the various orchards by experiment station officials and the county agents. In regular use, Cordy said, it wouldn't be necessary to make readings so frequently. Right now, while the method is still in experimental stages, it is necessary to keep a constant record.

Others Used

While the spun glass moisture wafer is strictly a new development for this area, Cordy said similar devices made of gypsum and plastic have been used before here. "These weren't really satisfactory" he explained. "Gypsum also tends to rot and can't be used very long. Plastic is inadequate because it is influenced by salt contained in the soil."

The county agent said Dr. R. J. Higdon, horticulturist for the Medford experiment station, happened to see the spun glass wafers in use by experiment stations in another part of the country. The spun glass seemed sturdy and appeared promising for use in all kinds of soil. Versatility is an important factor here since Oregon soil types are so varied. Thus, with assistance from the extension service, Dr. Higdon brought the spun glass wafer experiment to this area.

Ultimately, it is hoped the new moisture measuring method will take some of the guess work out of irrigation. Soil may appear dry a few inches under the surface and the orchardist may think it's time to irrigate, the county agent said.

Soil Augers Used

However, examination at a depth of three or four feet may reveal there is sufficient moisture in the soil and irrigation at that time could be damaging. Soil augers have been used to determine moisture in earth at greater than surface depths, but seem only partially effective.

Cordy said cost of the moisture measuring equipment is about $50.

Experiment station personnel and the county agents are enthusiastic over early indications in their experiment. They hope to be able to recommend the soil moisture wafers for general use here in about a year.

MEASURING MOISTURE — Martin Luther Cordy, county Jr., left, watches as Clifford horticulture agent, turns dials on a meter to determine moisture content in the soil at the Rogue River company's Clancy orchard. Three soil moisture wafers, consisting of spun glass partially encased in metal, are buried at varying depths in the earth. The wafers are attached to wires, which extend above the earth surface. The meter is connected to the wire ends to give the moisture reading.

School District Gets Taxes on Wrong Land

Salem — (U.P.) — The wrong Marion school district has been receiving taxes on about 60 acres of valuable river bottom land for the past 76 years.

The error came to light when Mrs. Chester Austin requested that her 40 acres be annexed from the Salem district to Riverview.

Another error discovered at the same time was that George Hoyser, a member of Riverview district school board for 18 years, has served illegally since he was in the Salem district.

Everyone took for granted the land was in the Riverview district, Hoyser said, and his grandfather even donated land on which the present school is located. Hoyser planned to petition for a switch in the boundary.

No Protests Voiced In Budget Hearing

Central Point — No protests were voiced and no one was present at the public hearing on Central Point's 1956-57 city budget last week.

City councilmen passed ordinance 421, which officially adopts the budget for the fiscal year. Councilmen also established a city hall building sinking fund and amended the city building code to allow construction in dwellings without use of floor joists.

The council also requested that the planning commission set up standards for streets, parking strips, sidewalks and service areas within the city.

Fire Engine Kills 6; Injures 10 in Japan

Tokyo — (U.P.) — A speeding fire engine veered into a crowd of pedestrians in Northern Japan Friday, killing six persons and injuring 10 others.

Police at Kushiro, Hokkaido Island, said the engine was en route to a fire when the driver tried to avoid a child on a tricycle in the street and swerved into the crowd.

Fruitland Man Dies Of Injuries in Fall

Ontario, Ore. — (U.P.) — George H. Bacon, 73, Fruitland, Idaho, died Saturday of injuries suffered Friday when he fell from a pickup truck near the Ontario livestock commission yards.

The dead man's son, J. Robert Bacon, said the truck was "not in motion when its door sprang open and the elder Bacon fell onto the ground.

Bacon had been in critical condition in Holy Rosary hospital in Ontario until the time of his death.

Medford National Guardsmen Return From Two-Week Training

Approximately 200 Medford National Guardsmen of HQ and HQ Company and Company A, both first battalion, 186th infantry regiment of the 41st division, arrived home Saturday afternoon at the end of the annual two-week encampment at Fort Lewis, Wash.

The local group arrived by train about 1:15 p.m. They left Medford at 12:01 a.m. June 16.

The last week of camp featured night firing demonstrations, the division rifle match and a testing program for 1,000 selected troops. The testing was to determine how National Guardsmen compare with active Army troops in basic military knowledge. Each National Guard division in the nation will carry out the testing this summer. The 41st division was the second group to complete it.

98 Per Cent

This year's camp attendance was approximately 98 per cent of the total strength of more than 9,600 officers and men. Brig. Gen. George S. Cook, Seattle, in his first year as division commander, said he was pleased with the attendance record and the training level exhibited by many units.

Training in the final week included small unit tactics, practice on artillery ranges and bridge building by the engineer unit. Tank companies fired 90 millimeter guns at the Yakima Firing center, firing jeep-mounted 105 millimeter recoilless rifles.

Highlight of the encampment was the annual Governor's Day review held Saturday, June 23.

Troops received pay Friday, with agent officers counting out more than $700,000 for the two-week camp. All units then packed equipment and loaded vehicles for the trip to home stations. Guardsmen from distant points, including Medford, returned home by train, while other units made the trip in motor convoys.

The men consumed $140,000 worth of rations in the two weeks, used 10,000 cots and mattresses and fired more than 1,500,000 rounds of ammunition. The 1,200 vehicles used 100,000 gallons of gasoline in two weeks. Medford's National Guardsmen were quartered in the northeast section of Fort Lewis.

SWITCHBOARD OPERATION — Pvt. Michael Smith, member of Medford's Headquarters company, 186th infantry regiment, operates the first battalion switchboard, while PFC Jerry Armstrong, also from Medford, watches.

ARMY FIELD RADIO — Recruits of Company A, 186th Infantry regiment, look on with interest as Pvt. Larry Gants, far right, explains the use and importance of the Army field radio. From left to right are Pvt. Ralph Waldo, Pvt. Dick Callender, Pvt. Glen Johnson, Pvt. Ted Yarnell, Pvt. Gene Dalbec, Pvt. Ross Taylor, Pvt. Don Pelham and Pvt. Gants. During the first week of training, the recruits attended a 785-member school where they learned operation of weapons. They moved into the field with their home units for the second week of training in their assigned jobs. These southern Oregon men meet with Company A in Medford.

(Oregon National Guard photograph)

MACHINE GUN SQUAD — Field training in mock warfare is a major part of defense. These National Guardsmen, members of Medford's Company A, 186th infantry regiment, are engaged in "battle" with a simulated aggressor enemy. The machine gun squad consists of, left to right, Sgt. LeRoy Jahnke, squad leader; SP3 Bill Cardwell, and PFC Theodore Keys, assistant gunner. The squad is armed with the .30 caliber light machine gun.

(Oregon National Guard Photo).

Elk Lumber Announces New Mill Opening

Elk Lumber company has announced it will open its new stud mill at 7 a.m. Monday.

This is the second new phase of the Elk operation to be started within a period of five days. The company began using its new power house last Thursday.

George Flanagan, general manager of the firm, said the stud mill is designed to reduce wood leftovers. He said the logs are broken down into small parts by use of thin gang saws and a larger proportion of the logs can be utilized.

The new power house is providing energy for operation of the new mill. The old pine saw and plaining mills are still on COPCO power, Flanagan explained. The power house is designed to remove carbon particles from the smoke before it is discharged into the air.