

PROGRAM.....

Chats by the Weather Man.

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ANNOUNCEMENT: Station _____, broadcasting the regular Wednesday evening Chats by the Weather Man, released by the U. S. Department of Agriculture. The Weather Man is going to tell his radio audience about some of the lesser known services of that widespread organization, the Weather Bureau.

We have been asked to tell you folks out there about some of the unusual things the Weather Bureau does which every Tom, Dick, and Harry do not know much about.

You people are familiar, I take it, with the daily forecast work of the Bureau. At least you give us enough welcome phone calls to make us feel that you are familiar with that work. We are now accustomed to advising Mrs. Smith to call off her coasting party because it's going to rain. We have even been asked if it would be safe to take the baby out for an airing. Oh, the daily forecast work is known to every one.

But do you know that the Bureau is cooperating with the Nebraska State Agricultural College to measure wind velocities over long periods in that State, in order to find out if it would be practical for farmers to store their batteries by generators driven by windmills?

There's more to it than just that, of course. So I'll tell you about this windmill proposition first -- then go on and mention a few other Bureau services that aren't commonly known.

The day seems not far distant when hundreds of rural homes will have wind-power plants to generate electricity to light those homes and to do much of the farmers' work. But wind-driven electrical generators haven't come into general use on farms because of the feeling that the wind can't be depended upon to blow steadily enough and often enough to drive these generators. To meet a growing demand for an economical and efficient wind-driven electrical generator, scientists of the Weather Bureau and the Nebraska Agricultural College have made a study of wind velocity at Lincoln, Nebraska, for a 10-year period to find out how much of the time the wind is too light to drive a generator. They have found that a minimum wind velocity of 10 miles an hour is necessary to charge batteries. But you don't have to charge batteries every day. So the wind need not blow at that rate every day. On the average, 5-hours' charging every 2 or 3 days is enough to keep the batteries well charged.

Farmers naturally use more electricity to light their homes in the winter, when the nights are long and some of the days are a bit muggy. Consequently, batteries require more frequent charging at such times. The scientists have discovered that in some sections the wind blows 10 miles an hour, or more, often enough in the winter to keep the batteries in good condition.

That's an interesting Weather Bureau activity.

Have you ever seen a snow chart? It is a blank map of the United States on which specialists in the Weather Bureau plot the snow fall. These charts are gotten out every week during the snowy months, in other words, from early in December to late in March.

Look at this map and you can tell at a glance where in the United States the snowfall is heaviest -- where it is lightest -- and where there's no snow at all. Areas having some snowfall are shaded in red. A recent map showed that the depth of snow over the United States varied from none in some parts of the South, along the Pacific Coast, and even in some sections of South Dakota and Nebraska -- to 79 inches in the mountains of Washington State. Many uses are made of the snow charts. These maps also show the thickness of ice on rivers and harbors, and this information is of much economical value to harvesters of ice, those engaged in river navigation, etc., but this is another story.

A man would think that not much can be done to regulate the flow of great rivers. But it's possible to determine a lot about how much water there'll be in great rivers from year to year. The men who operate the dams and locks along the Ohio River, for instance, are interested in knowing about the rise and fall of that River. Without some such knowledge, the operation of the locks and dams is conducted with great difficulty and sometimes with great loss. Operators of electric power plants along the rivers also want to know how high the water will be in different years and during different seasons in the same year. If a man were planning to build a power house along some stream, he'd naturally want to know if he could count on that stream developing enough current to run his generators.

Well, the quantity of water in a river depends, to a very large extent, upon the quantity of rainfall in the section of the country through which the stream flows. For the purpose of aiding navigation and hydroelectric developments along certain rivers, the Weather Bureau conducts special water-supply investigations. One of the most important of these is carried on in or near the watersheds of the Kentucky and Ohio rivers. Weather men measure the annual rainfall and make special surveys which prove mighty valuable to a large number of people living in the territories served by the two streams.

Of course the Bureau also conducts special river flood services, but they'll be considered later on.

It's history now, but the Weather Bureau cooperated with Norwegian meteorologists to furnish Captain Amundsen with special weather services on his Polar airplane flight. The services were broadcast by radio, written in code. This is but one example of the widespread service the Weather Bureau offers explorers making hazardous trips to the lonely places of the earth.

The Weather Bureau has enlisted the aid of captains of ships on the high seas in maintaining its unusual marine meteorological service. This work extends to the ends of the earth and is one of the most interesting of Bureau activities.

This service is based on cooperation of the highest form. In return for weather information sea captains furnish the Bureau, the Bureau supplies these mariners with forecasts and other weather information of great value to them. The Weather Bureau works hand in glove with the Hydrographic Office and the Office of Communications of the Navy Department. The Hydrographic Office publishes the so called Pilot Charts which picture the weather on the high seas from day to day. Every mariner is familiar with these Pilots' Charts.

The Bureau gets the observations from about 1,400 ships -- a real navy. The number of single observations received run into big figures. Many of the vessels that supply this information never visit American ports. They sail from all harbors of the world and supply the Weather Bureau with valuable information on the state of the ocean from one corner of the earth to another.

All this information is gathered together, charted, and supplied to ship captains. Radio -- the press -- and wireless contribute to the wide distribution of this wreck-preventing information.

We've already had a lot to say about how the farmers are using the weather forecasts. Here are some extracts from a letter received by a weather man in New York state which show that the agriculturists are using harvest weather predictions. The State county agent wrote the letter:

"We recently sent a questionnaire to the county agricultural agents in New York State regarding a few of the outstanding projects carried out this year", the county agent writes. "I included this question in the questionnaire: Number of farmers in your county using harvest weather forecasts service in 1926? Forty five of our 55 county agricultural agents reported use having been made of the service in their counties. The total number of farmers using the service is 24,501. This is very gratifying and I think it clearly indicates the way in which the service has been accepted and is being used by New York State farmers....

"I do not believe we would be stating the value too high if we should say that every farmer that used the service saved an average of \$5 as a result of it. We know that in a great many instances it was many times this amount. However, if we use this figure, the harvest weather forecast service alone was worth \$122,505 to the farmers of New York State last year, or an average of \$2,722 for the 45 counties reporting".

C.W.M. 1/19/27

The harvest weather service is only one of the several the Bureau extends to the farmers of the United States.

Thank you for your attention, and good night.

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ANNOUNCEMENT: That concludes the Weather Man's chat for this evening. He will go on the air again next Wednesday evening.

National Oceanic and Atmospheric Administration

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