

The Farmer's Advocate AND HOME MAGAZINE.

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DOMINION.

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movement. Farm summer-homes for city dwellers are not uncommon. These farmers, so called, during the summer months contribute nothing to the permanent social, educational and religious life of the people. Too often they are examples of extravagance which perturb the minds of the young people in the community and excite dreams of a different mode of living. When the farm-ward movement materializes the class that will have a lasting influence are those who go back with their all and make the farm their home and the home of their children.

The Significance of Weather Forecasts.

People of the twentieth century are losing confidence in the various phases of the moon and the signs of the almanac. From the dawning of intelligence in man observations have been made regarding natural phenomena, which have led men to form definite conclusions regarding weather. These have been handed down from time immemorial, and oft-times in the present era they act as a guide to people in various callings of life. Through the invention of the barometer, thermometer, hygrometer and other meteorological instruments accurate observations can now be made, from the study of which some of the laws which govern the changes in atmospheric phenomena have been deduced.

It is through the service of the meteorological stations that we are informed as to what the weather is liable to be in the succeeding 24 or 36 hours after the "probs" appear. These forecasts to mariners and even to transportation companies on land are of inestimable value, but we believe that farmers, especially growers of truck crops or small fruits, could make more use of this information than they have been doing. Growers in the sub-tropical states to the south have depended to a large extent upon the

Weather Bureau at Washington to inform them of threatening frosts and dangerous cold waves. The forecasts from this station reach nearly 90,000 addresses daily by mail. The greater part being delivered early in the day and none later, as a rule, than six p. m. of the day of issue. They are available to more than 5,500,000 telephone subscribers within one hour of the time of issue. This is entirely distinct from the distribution effected through the press associations and the daily newspapers. The information is first sent out to sub-stations and then distributed to the various centres. The rural free mail delivery system and the rural telephone lines are also being utilized to bring within the benefits of this system a large number of farming communities.

There is a meteorological office in the city of Toronto, and the farmers of Ontario could utilize



Fig. 1—Blow-out in the Sand Hills.

this service to better advantage. Forecasts appear in the daily papers, and the information which the Bureau dispenses is available at the central offices of telephone systems, so by proper connections farmers living somewhat remote from the large centres might get this information practically at first hand. However, atmospheric conditions arise that require subsequent announcements, and a more explicit interpretation of the warning as applied to different localities.

Through the system of District Representatives now established in Ontario farmers should be able to get forecasts of frost and cold waves in time to carry out what preventive measures they deem expedient. At St. Catharines and at Brantford, associations get special forecasts of frosts from the Weather Bureau at Toronto, and distribute it to the various members. The meteorological staff express themselves as willing to extend this service to other associations. If this information could be received at the District Rep-



Fig. 2—Active Dune in the Sand Hills.

representative's office it could be dispensed from there to associations and individual growers who would profit by these warnings, and the numerous societies could be so organized that through their officers forecasts could be distributed to all growers in the community.

The late frosts of the spring just past have shown the necessity of efficient preventative measures, to preclude serious injury to crops. The forecasts as handed out by our stations are not always accurate in every detail, but they are correct as far as instruments and records can make them. They are of inestimable value, and it seems that the time is ripe for a linking-up of all individual producers and associations in order that this in-

formation may be handed to them in time to effectively fortify against dangerous atmospheric conditions.

Nature's Diary.

A. B. Klugh, M.A.

I have recently visited a piece of country near the Lake Huron shore which illustrates very well the effect of unwise treatment of land, and from the results which we see here we can draw some lessons which may be of value in dealing with land in other parts of the country where similar conditions exist.

Back from the present shore of Lake Huron, and at a distance from it varying from one-half to two miles is a ridge of sand-hills. This ridge varies in width from less than half a mile to over two miles, and was at one time the shore of the lake. Geologically speaking the sand-hills constituted the lake shore very recently, as the snail shells found in the sand belong to the same species which exist in the lake to-day. The higher portions of the sand-hills are old dunes which were formed along the shore from the fine sand ground up by wave action. After the lake-level was lowered the sand-hills became covered with vegetation, and finally with a fine mixed forest. It may at first sight seem strange that this poor soil, a fine, white sand, should be able to support a heavy growth of timber, but we must remember that the trees not only tend to prevent evaporation and thus conserve moisture, the greatest need of light soils, but supply humus by the decay of their leaves.

This was the condition of the country in which the first settlers found it—a rolling country covered with a forest of Sugar Maple, Beech, Paper Birch, Hemlock and Pine. The Pine was the first to go, the Hemlock was cut down, barked, and the logs left to rot where they fell. Then they started to make clearings, and when they burnt off the clearings they allowed the fire to escape to the surrounding woods. In some places the fire licked up the timber and licked up the thin layer of humus in the soil. As soon as the soil was thus denuded the sand dried out—the old dunes which had been fixed for probably thousands of years became active again, the sand shifting under the action of the wind. In some places where the land was sheltered by a belt of hardwood forest from the winds from the lake, grass was able to establish itself on the cleared land. But as hardwood became more valuable this belt of forest was cut down, the result being as shown in fig. 1, where we see a field in which the wind has made a "blow-out" in the sand. The sand from these "blow-outs" forms active dunes, which move along, burying fields, roads and trees. In fig. 2 we see such a dune descending on a field, and protruding from near the top of the dune is a Maple tree which it has killed. The field upon which this dune is advancing was in 1908 a good pasture field, although sandy it lies in a hollow and is moist enough to support a good growth of grass. Now it is practically useless.

If all other evidence were lacking to show us that these dunes in the sand-hills have only been recently rejuvenated, the botanical evidence would be sufficient to indicate it, because there are none of the species of plants—such as the Sand Reed, Sand Willow, Beach Pea, Cackile, etc.—which are characteristic of active dunes in regions where they have been established for some time. This absence of sand-binders makes the problem of dealing with these dunes all the harder, and the only hope of checking the advance of the dunes lies in the introduction of these plants. Such introduction would have to be done by means of "sets" or cuttings, as seeds cannot germinate and grow in a seed-bed which is constantly shifting.

The lessons which we can draw from the present state of this piece of country are that in regions where there are fixed dunes as much of the land as possible should be kept permanently in timber, that the higher elevations should on no account be cleared, for even if cleared they are useless, and that the very strictest precautions should be taken to guard against the running of fires.

In fields where a good stand of red clover was cut fairly early it may be profitable to handle that plot in such a way as to obtain a crop of seed. Generally the weather this year seems favorable for a ready and vigorous after-growth. The price of seeds warrants a farmer growing his own if he can secure a tolerably good yield. It will be necessary, of course, to keep buckhorn and other undesirable plants out of the field as such small seeds cannot be cleaned out satisfactorily. Prospects are that alsike will be cheap, but there is no indication at present that a diminution of the price of other grass seeds will occur. If local conditions are favorable the matter of producing enough clover seed for one's own use is worthy of consideration. The acclimatization of crops to one's own community and farm is growing in favor.