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? WHY THE WEATHER ?

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By Dr. Charles F. Brooks
of Clark University

FROST FIGHTING AND DROUGHT FIGHTING

Even without such expensive artificial measures as orchard heating or irrigation, frost fighting and drought fighting are not by any means hopeless procedures. They have much in common: one seeks to preserve heat, the other, moisture. But the methods are opposite. To maintain temperatures above the danger point, sunniness, dryness and free wind movement are needed: to maintain soil moisture above the wilting point, shade, increased humidity and restricted winds are helpful. It is fortunate that summer frost and summer drought are not most threatening in the same regions.

The Finns in Finland, and northern Minnesota according to Prof. Eugene Van Cleef, have devised a fairly successful method of combatting the frost hazard in the midst of their all too short crop season. First the moor or forest must be cleared to expose the soil to the warming and drying influence of the sun. The forest must be cut back some distance from the edge of the crop-land, especially in Finland, for at the high latitudes trees cast long shadows. And the clearing must be made still larger in order to provide a free sweep of the wind and to minimize the insidious flow of chilly air from the dark recesses of the forests. In Finland, where the prevailing wind in summer is from the southwest, the clearings have their longer axes parallel to these winds. Year after year as the clearings are enlarged the danger from frost becomes less and less because of the increasing size of the warmed area and the decreasing supply of cold air.

The farmers of our West have met the drought hazard in part by planting windbreaks at least on the southwestern sides of their fields. A belt of trees performs the threefold function of reducing slightly the heating and evaporating effect of the sun, of locally humidifying the air, though at some expense to sub-soil moisture, and of reducing the velocity of the desiccating winds for a few rods.

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