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? WHY THE WEATHER ?

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FRUIT, FROST AND FOG

Every farmer knows that hill slopes are much better than lowlands for orchards and that good air drainage is a protection against unseasonable frost. What happens on a clear calm night in spring? Plants and the ground give off heat by radiation rapidly. The ground, and the air in contact with it, are soon cooler than the air some distance above. Lack of wind allows the air to become stratified, with cold heavy air at the bottom. The cold air tends to slide down slopes and collect in pocket-like hollows. Such hollows are most subject to frost. The cold air layer in the hollow is deeper than elsewhere on account of drainage, and also colder than on the slope because of its longer contact with the ground.

Occasionally the frost line is so sharp that fruit buds on the lower part of a tree will be killed, while those above escape damage. Buds nearer the ground are sometimes more advanced than those higher up and therefore more subject to injury. Sometimes, however, when a killing frost appears imminent a fog may suddenly form and by its blanketing effect protect the fruit. As one observer has described the situation in a valley in the central Appalachians, "It is almost like a game of hide and go seek between the three - fruit, frost, fog. About once in four years the fruit wins."

(Pick up one column matrix 5*14)

(Tomorrow: Number of Thunderstorms)

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