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? WHY THE WEATHER ?

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LIGHTNING AND FIELD CROPS

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Crops growing in the fields are not infrequently damaged by lightning. Many such cases have been reported in recent years, especially in connection with cotton, potatoes and beets. The injury occurs in more or less circular patches from 10 to 50 feet in diameter. Near the center the plants are killed, while toward the border they show wilted leaves and other evidences of injury. A plausible explanation has been offered as follows;

Unlike the damage ordinarily done by lightning to trees, the effect on these crop plants is probably confined to parts below the ground. Apparently the lightning does not strike the individual plants generally over the injured area, or at least the main force of the discharge does not pass through the length of their stems. According to two recent investigators of the subject:

"When an electric storm breaks suddenly following a period of dry weather and the first rain wets the top soil, there remains a layer of dry earth between this wet surface and the moist soil underneath, which is a poor conductor of electricity. When the lightning strikes the wet surface soil, it disperses in all directions, horizontally and then downward into the earth, following lines of least resistance. The plant stems and roots with their abundant water content are better conductors than the layer of dry soil just mentioned and so the electrical current passes through them. The tissues may thus be variously injured or killed depending upon the amount of current passing through each. The strength of the current, of course, diminishes the farther it gets from the center of the affected spot; hence the lessened injury at the margins of the area. In some cases, apparently, the discharge may be broken and 'strike' in several spots, near together."

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