The Influence of Soil Type on the Accumulation of the European Corn Borer

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Any discussion of the European corn borer immediately involves a consideration of the corn plant, for the conditions in general which influence the behavior of the insect also influence the growth of corn. Thus climate, which limits the areas where corn can be grown best, also in a large measure may be expected to limit the areas most acceptable to the borer. However, over an area where fairly uniform climatic conditions prevail or where climate is not the limiting factor in corn production or corn borer accumulation, soil conditions may influence the behavior of the corn plant, and therefore, indirectly influence the responses of the corn borer. It is the indirect influence of soil conditions and soil types on corn borer accumulation that will be discussed in this paper.

Since the beginning of corn borer investigation in Ohio the insect has been studied in relation to the development of corn as indicated by the rate of growth and time of tasseling or silk- ing. It appears that the nature of the response of the corn borer moths to corn and the rate of larval survival depends largely upon the stage of development attained by the plant at the time the moths are depositing their eggs and the larvae are establishing themselves.

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