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and activity of the sugarbeet root maggot in the Red River Valley.

Day degree accumulations have been used to forecast adult root maggot activity in previous years with some success. These predictions used ambient temperature and a sine wave calculating method with a lower threshold of 47.5°F and an upper threshold of 99°F. With this procedure, the first 80° day following accumulation of 600 DD usually coincided with peak activity in new beet fields. The weakness in this method has been use of temperature data from distant locations and differences between ambient and soil temperatures being dependent on year. Establishment of a network of weather stations, sticky-stake sampling for flies and temperature data on a "next day" basis has renewed our interest in forecasting. Access to soil temperatures has prompted examination of soil-DD to fly emergence as a tool which would give warning of pending fly activity in new beet fields. Studies in the laboratory indicate a DD accumulation of 450 (based constant daily temperature and a threshold of 47° F) correlated with 50% emergence of adults. In the past two years, peak activity in fields from which adults are emerging has occurred near the time of 450 DD accumulation based on average soil temperature and a 47° threshold. Peak activity in current beet fields then occurred 4 to 10 days later when temperatures reached near 80°. Timely prediction of fly activity and populations, along with effective post-emergence treatment options may lead to reduced treatment at planting.