

6 Flight of the western bean cutworm: population patterns of a noctuid pest over the past 30 years

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Abstract: *Striacosta albicosta* (Smith), the western bean cutworm (WBC), is a univoltine noctuid pest of corn and dry beans native to North America. The original distribution of this pest was the west central region of the United States. Since 2000, significant WBC infestations have been documented as far north as Ontario, Canada, east to Massachusetts, and south to Mexico. WBC overwinter as prepupae in the soil and typically emerge as adults in late June to early July. Peak moth flight usually occurs in mid-July in most regions and field scouting for egg masses is recommended between 25-50% cumulative annual moth flight, when oviposition rates are highest. Larvae can cause substantial kernel damage to infested ears and, because larvae located within ears are not exposed to insecticides, applications should occur between oviposition and larval entry into ears. The objective of this study was to characterize WBC flight patterns over 30 years of observations made at black light traps deployed near cornfields in Concord, Clay Center, and North Platte, Nebraska. Trap captures were compared across 5-year periods and sites to test for changes in WBC flight patterns over the course of data collection, and to determine what biological and environmental factors influence annual WBC moth flights. Because efficient scouting is a critical component of a successful integrated pest management program for WBC, understanding changes in flight patterns and seasonal dynamics will improve the timing and efficiency of field scouting and treatment decisions.