

Western Bean Cutworm in Michigan:

Quick recommendation sheet for dry beans



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Assessing Western Bean Cutworm Pressure

WBC egg masses and larvae **are hard to find** in dry beans, thus scouting for larvae is very difficult. Use pheromone traps to monitor adult flight. As few as 150 total moths indicates a large local population. Scout nearby pre-tassel and pollinating corn fields for egg masses. Scouting corn is easy and can indicate pest pressure in the local area. Seven to ten days after egg masses are found in corn, scout dry beans for feeding injury – that is, flowers with pinholes, small pods cut off at pedicel, and larger pods with chewed spots or holes. Feeding is difficult to see without careful and patient examination.

Triggers for an insecticide application to dry beans:



cumulative pheromone catch in nearby traps is >150

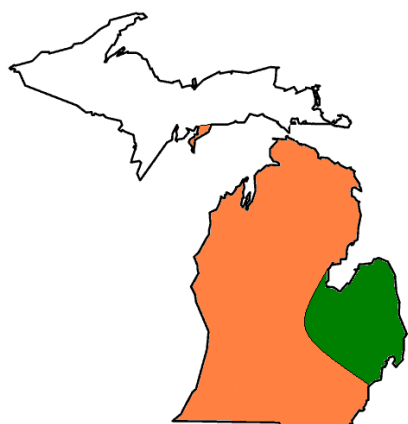


neighboring pre-tassel corn fields have egg masses



blossom or pod damage is found in the dry bean field (see pg 2)

Spray with a long-lasting pyrethroid 7 to 14 days after peak flight. MSU research shows that one well-timed spray is just as effective as multiple sprays. It is preferable to be on the later side of this interval than to spray before peak flight. But don't wait too long, as the *pre-harvest intervals* are as long as 21 days. Note that all conventional insecticides for dry beans can kill honey bees. Note the *honey bee warnings* on insecticide labels, and follow best practices to avoid bee exposure. In dry years when spider mites are also a concern, choose an insecticide that does not flare this secondary pest.



Although dry bean fields in central Michigan and the Upper Peninsula have experienced elevated levels of pick at harvest from WBC damage, infestations in the Thumb and Saginaw Valley are lower. This difference could be related to soil type, with higher overwintering success of larvae in areas with sandier soils the central and northern part of the state. However, there is the possibility for localized populations in the Thumb and Saginaw Valley, especially in areas with sandy soils.

Western Bean Cutworm Lifecycle

- One generation per year
- Adult moths emerge in late spring to early summer from the soil
- Moths lay eggs in mid-July through early August
- Larvae feed first on leaf tissue and blossoms, then on developing pods and beans.
- Older larvae feed at night or on cloudy days, and thus are difficult to find during the day.
- Damage to dry beans results in reduced yield and quality of the crop
- Mature larvae burrow into the soil from late August to early September, and overwinter

WBC life stages and damage on dry beans in Michigan

September - June

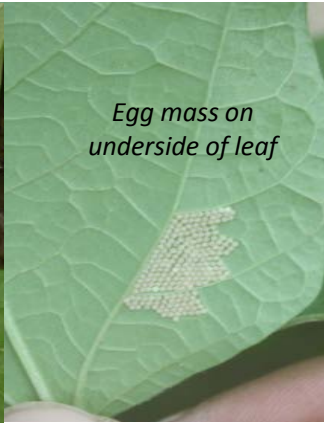


Overwintering chamber

July - August, after corn is not attractive



moth in canopy



Egg mass on underside of leaf

early August - larvae in blossoms



early-mid August



Mid-sized larvae leave scars on ← pod surface, while older larvae chew into pods & beans →

Larvae difficult to find - feed at night & spend daylight hours on the ground.

late August



Early September - pod & bean damage is more obvious



Harvest



Finished Product

