

Western Bean Cutworm in Dry Beans

A study was done to observe larval location in dry beans. Dry bean plants were infested with WBC egg masses. Based on days after hatch (DAH) plants were dissected to recover larvae from the plants.



WBC larvae in blossom

Location	% of larvae recovered at each location				
	1 DAH	5 DAH	10 DAH	14 DAH	21 & 28 DAH
Egg mass leaf	28	0	-	-	Larvae were difficult to find and were assumed to be on the ground.
Other leaves	22	50	25	-	
Flowers	50	50	25	-	
Pods	-	-	25	20	
Ground	-	-	25	80	

The majority of larvae were found in blossoms 1 DAH and 3 DAH. From 5 to 14 DAH, many were found on the ground. After 14 DAH, larvae were rarely or not found, but pod feeding increased, indicating larvae were present. **This demonstrated the difficulty of scouting for WBC larvae in dry beans.**



WBC damage to blossoms, developing pods, and mature pods.



Insecticide Timing

An insecticide timing trial was done in Montcalm County. Plots were infested with egg masses on July 23, then sprayed one time 4, 11, 18, or 25 Days after Hatch (DAH), or all four dates, or not at all. At the end of the season, rows were hand and machine harvested to assess pod feeding and bean damage. Plots sprayed multiple times or soon after egg hatch had virtually no pod feeding. Much of the pod feeding done a week or two after hatch was cosmetic, and did not go all the way into the pod. Most importantly, plots sprayed a single time up to 18 days (or 2.5 weeks) after hatch had very few damaged beans. Spraying once, soon after infestation protected pods similar to multiple sprays.

Treatment	% Pods Damaged	% Beans Damaged
Multi-spray	<1%	0
4 DAI (27 July)	<1%	0
11 DAI (3 Aug)	3%	0.1
18 DAI (10 Aug)	3.5%	0.1
25 DAI (17 Aug)	4%	0.6
Not sprayed	6%	0.8



WBC damage to dry beans

Lessons Learned:

- Scouting for egg masses & larvae in dry beans is not practical. Look for pod feeding instead
- Time spray application at, or just after, peak flight if feeding is found
- Multiple sprays are no better than a *single well-timed spray*
- Spraying earlier is better.....but a *late spray is better than none at all*