

2018 Western Bean Cutworm Guidelines for Ontario Dry Beans

Tracey Baute and Meghan Moran, OMAFRA and Chris Gillard, University of Guelph Ridgetown Campus

Western bean cutworm (WBC) has become the primary pest of corn in the Great Lakes region and is reaching that status in dry beans too. WBC damage was found back in 2014 in a few dry beans fields between Thamesville and Strathroy and has now expanded to most of the dry bean growing regions here. The challenge we have with this pest in dry beans is our inability to successfully scout for it before damage occurs. Unlike in corn, where you can spot WBC egg masses and larvae feeding during the day, in dry beans the larvae only feeds at night while hiding in the soil during the day. The architecture of the dry bean plant also makes it challenging to spot egg masses or even pod feeding, until leaves start to drop off the plant near harvest. Until we have a better handle on effective scouting methods, below are the WBC management guidelines for 2018.

Five key elements to effective WBC management in dry beans for 2018

1. Trapping – Place two WBC pheromone traps along the dry bean fields' edge, with one of them placed on the prevailing wind side. Monitor traps weekly from the end of June until mid-August to determine when peak moth flight (when trap counts begin to drop after climbing for a few weeks in a row) occurs. Pod feeding is expected to begin approximately 10 to 21 days after peak moth flight. More information on WBC trapping can be found at: <https://www.cornpest.ca/wbc-trap-network/>
2. Scout in adjacent corn fields – As your region approaches peak moth flight, it is a good idea to scout any corn fields that are adjacent to the dry bean field for signs of WBC. Scout for egg masses in corn fields in the pre-tassel to full tassel stages around peak flight period. If the adjacent corn field reaches the accumulated threshold of 5% of plants with egg masses, the dry bean field will likely also need to be sprayed.
3. Current action guideline – Until we have found a more effective way to scout for WBC in dry bean fields, the suggested action guideline is: if the two traps have accumulated at least 150 moths, it is a good indication that the dry bean field is at risk and will likely need to be sprayed once pods are developing on the plants. This is particularly true for larger seeded beans like cranberries that not only result in picks from the feeding damage but also seed discolouration from exposure to oxygen from holes in the pods created by WBC. Try to scout for pod feeding before spraying but use the trap counts as the key indicator.
4. Proper spray timing – Do not spray the beans immediately after the corn crop has been sprayed. Wait until pods are developing on the plants. WBC does very little leaf feeding so the only way to expose them to the insecticide is if residues are on the pod surface when they go to feed.
5. Recommended products – Do not use Cygon or Lagon (a.i.: dimethoate) as this chemistry has no effect on WBC. There are 3 insecticides registered for WBC control in dry beans: Matador, Coragen and Voliam Xpress. Use high water volumes to ensure pods are coated with insecticide. Spray after 8 pm as many pollinators forage dry bean flowers during the day. Rotate chemistries used each year to reduce the risk of WBC developing resistance.

More information on western bean cutworm can be found at:

<http://fieldcropnews.com/2018/05/western-bean-cutworm-resources-for-2018/>