

Canola and Mustard XVI-8

Diamondback Moth

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Diamondback moth (DBM) cannot overwinter most years in the northern latitudes. Monitoring adult migration into northern canola production regions is important to determine the presence of this insect.

Identification (and Life cycle/seasonal history)

Moths are small, 1/3 inch in length, gray-brown colored insects with the folded wings flaring outward and upward toward their tips. Males have a row of three diamond-shaped yellow spots visible where the wings meet when the insect is at rest. Eggs are laid singly on canola or mustard foliage. Larva is a small, spindle-shaped, pale-green colored caterpillar that reaches about 1/3 inch in length. The tail end has a forked appearance. DBM larvae are distinguished by their violent wriggling, often dropping from foliage while suspended by a silken thread. Larvae feed on foliage but in dry years they may move to the reproductive parts of the plant and feed on buds, blooms and pods. Larva numbers are especially vulnerable to rainfall and humid conditions. Dry weather will cause leaf drop and cause larva to move to the reproductive portions of the plant. There are typically 2 generations per year, their importance as a pest is dependent on moth migration population, timing and conditions.

Plant Response and Damage

The larvae feed on plant foliage, chewing irregular holes in the leaves. Dry weather will cause lower leaves to drop and larva to move to the reproductive portions of the plant. Seedpod damage can lead to development of undersized, poor quality seed. Foliar damage by DBM larvae looks bad, but significant yield losses are not common. However, damage is much worse when plants are drought or heat stressed. Pod damage is likely to occur if lower foliage is damaged by drought or other insects.

Management Strategies

This insect is well documented for multiple resistance to many classes of insecticides.

In North Dakota treatment is recommended when larvae counts reach 25-30 per square foot and there is significant evidence of damage to flowers and/or pods.

Check confirm, GF-120, Spintor

Product List for Diamondback Moth, Loopers

Pesticide	Product/Acre	Preharvest Interval, Remarks
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Bacillus thuringiensis ¹	0.25-1.5 lbs(Deliver) 0.12 – 1.5 lbs (JavelinWG)	0 days to harvest. 4 hrs REI. Apply at first sign of newly hatched larvae. Reapply as necessary to maintain control.
Capture 2EC ^{R,1}	2.1 – 2.6 fl oz	35 days. 12 hr REI. Do not apply more than 5.12 oz /A /season. Do not make applications less than 14 days apart. See label for minimum gallonage.
Proaxis ^{R,1,2}	1.92 - 3.84 oz	7 days, 24 hr REI. Do not apply more than 0.72pt/A/season. See seasonal use rates for gamma and lambda cyhalothrin.
Lambda-cyhalothrin ^{R,1,2}	1.92-3.84 oz (Warrior with Zeon) 1.92-3.84 (Lambda T)	7 days, 24 hr REI. Avoid application when bees actively foraging by applying early morning or evening. Do not apply more than 0.72 pt/A /yr. See seasonal use rates for gamma and lambda cyhalothrin.
Pyrethrins ¹	2 – 16 oz (Evergreen EC 60-6) 4.5 – 18 oz (Pyganic EC 5.0)	0 Day, 12 hr REI . No less than 2 GPA by air or 10 GPA by ground. Buffer spray to pH 5.5 – 7.0.

¹ Label allows chemigation,

² Generic active ingredient, several formulations available, see labels for rates

^R Restricted use pesticide

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Categories: Canola, Mustard, Insects, Diamondback moth, Loopers

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