



*Plutella xylostella*

## DBM-ENEMY™

DBM-ENEMY™ is a ready-to-use pheromone lure and trap system engineered for eco-focused management of the Diamondback Moth (*Plutella xylostella*) in cruciferous crops.

### Benefits

- ✓ Early Detection
- ✓ Species-Specific
- ✓ Chemical-Free
- ✓ Enhanced Crop Health
- ✓ Yield protection
- ✓ Long-lasting & cost-effective

### Sex Pheromone Lure for Diamondback moth



## Overview

Diamondback Moth (*Plutella xylostella*) is the world's most devastating pest of Brassicaceae. It is renowned for its rapid life cycle, wide host range, and remarkable ability to develop resistance to control measures.

## Taxonomy & Identification

**Family:** Plutellidae

**Genus & Species:** *Plutella xylostella*

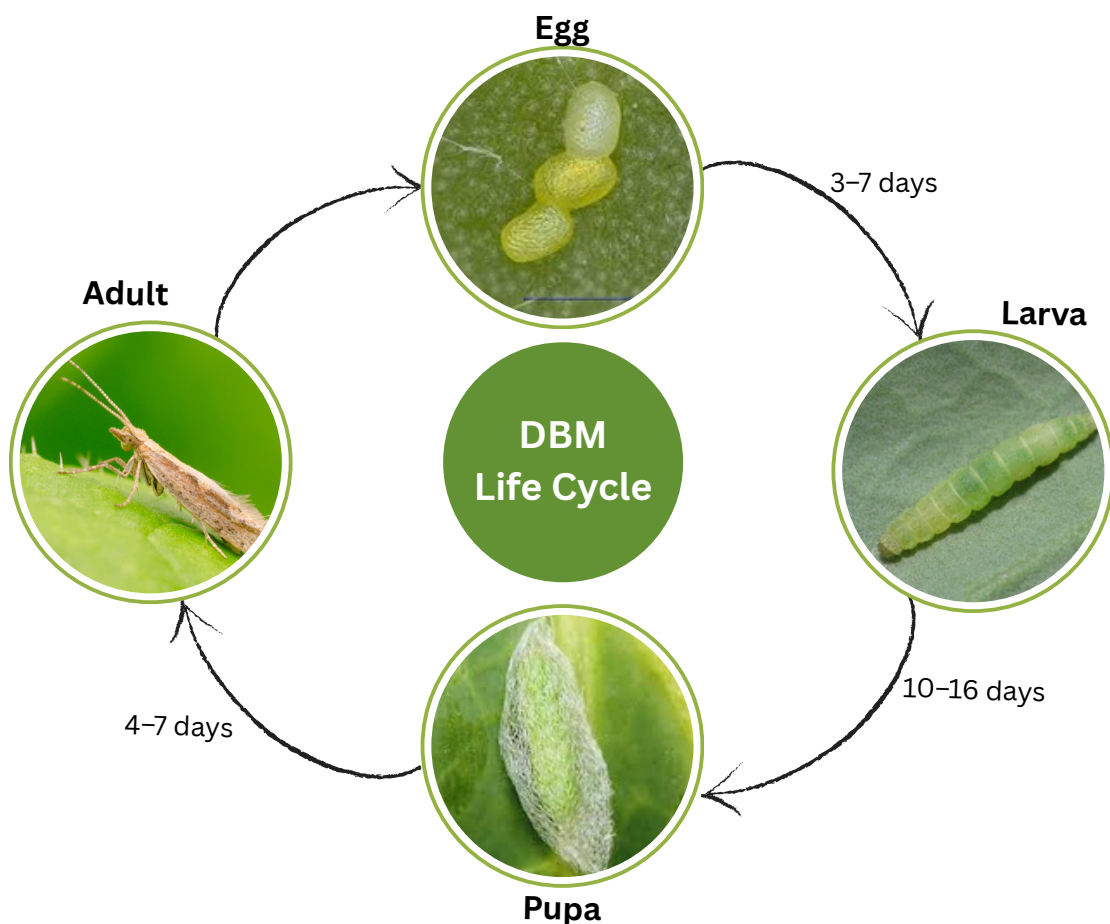
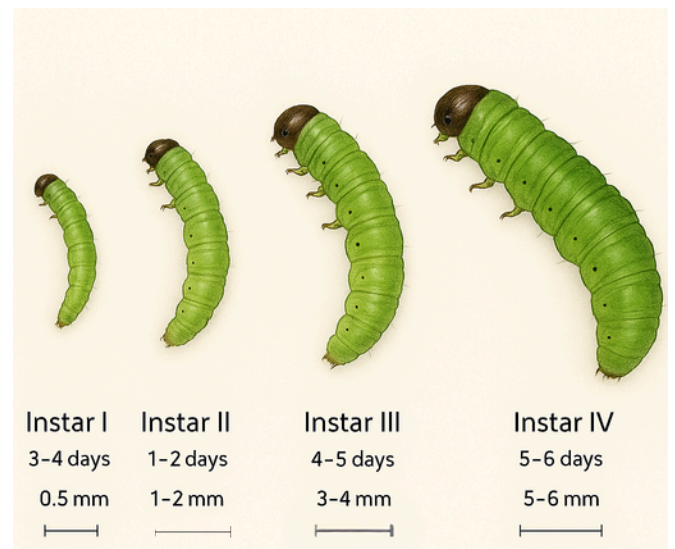
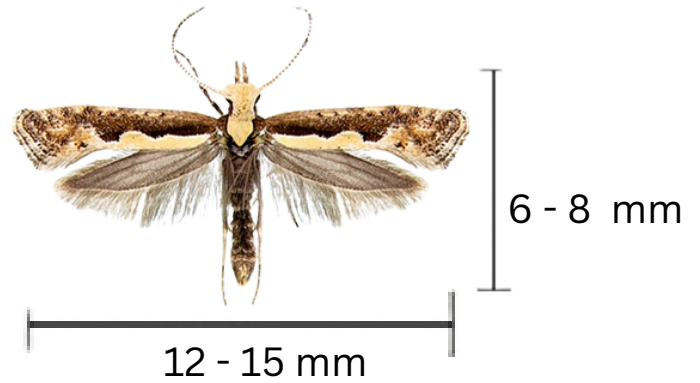
**Common Names:** Diamondback moth, cabbage moth, small cabbage worm.

**Adult Morphology:** Slender, gray-brown moths 6–8 mm long with a wingspan of 12–15 mm. Forewings bear faint pale lines that meet in a diamond-shaped pattern when at rest; hindwings are lighter gray with fine fringes.

**Larval Morphology:** Four instars, 0.5 mm at hatching to 5–6 mm at maturity. Caterpillars are pale green with a distinctive forked “tail” of two slender caudal filaments.

**Eggs:** Tiny (0.3–0.5 mm), yellowish, laid singly or in clusters on leaf undersides.

**Pupae:** Encased in loose, silken cocoons on foliage or stems; pupae about 4–6 mm long, initially greenish then brown.



## DBM Host crops

Turnip



Cauliflower



Cabbage



Kale



Broccoli



Radish



Diamondback moth (DBM) larvae begin their assault by scraping the underside of young brassica leaves, creating characteristic “window-pane” patches where they consume only the green mesophyll layer while leaving the transparent epidermis intact.



*characteristic “window-pane” patches*

Although these tiny injuries might seem innocuous at first, they reduce the leaf’s photosynthetic capacity and weaken overall plant vigor, making crops more vulnerable to environmental stresses and secondary pathogens.

As the caterpillars grow into their third and fourth instars, their feeding shifts from surface scraping to full-thickness consumption, skeletonizing large areas of foliage between the veins. This lace-like damage dramatically lowers carbohydrate production, stunting plant growth and hindering the development of new leaves, heads, or inflorescences.



*Foliage skeletonization*

In broccoli, cauliflower, and cabbage, such extensive defoliation can delay maturity, produce undersized or malformed heads, and create uneven fields that complicate harvest timing.

Worse still, DBM larvae target the tender growing points of tight-headed brassicas. By burrowing into developing buds and inflorescences, they leave small but deep holes that render produce unmarketable and invite bacterial and fungal rots. These entry wounds compromise head integrity, often leading to internal decay that remains hidden until after processing or unpacking, resulting in costly post-harvest losses.



*Unmarketable cabbage due to DBM larval damage*

Throughout their feeding, DBM larvae deposit tiny, dark frass pellets on leaves and within harvestable heads, contaminating produce and necessitating additional cleaning. Late-instar caterpillars also spin fine silken mats on leaf undersides and stems as they prepare to pupate, trapping moisture and creating microhabitats for other pests, such as aphids and whiteflies, which further degrade crop health and quality.

The cumulative effect of continuous DBM pressure is severe yield reduction and economic strain.



*Silken cocoons for pupating*



*Larval damage on cauliflower*

**Join the green army against DBM!  
Catch male Diamondback Moths before they breed**

## Plant Infestation Signs & Symptoms

- Irregular small holes in young leaves where larvae scrape away the leaf surface, creating a “windowpane” effect before advancing to full-thickness feeding.
- Skeletonized foliage with only veins remaining once caterpillars consume the softer leaf tissue between the veins.
- Tiny black frass pellets scattered on leaf undersides and along stems, marking larval feeding sites.
- Yellowing or browning of heavily damaged leaves that wilt and drop prematurely under severe infestation.
- Clusters of pale green caterpillars—often with forked tails—visible on the undersides of leaves or near the growing points.
- Fine silken webs or mats under leaves where late-instar larvae spin loose cocoons for pupation.
- Stunting of young plants when apical leaves are defoliated, resulting in bushy, deformed growth.
- Reduced head formation in cabbage or compactness in broccoli as feeding disrupts normal bud development.
- Patchy areas of weakened plants across the field where repeated generations have built up, leading to uneven crop maturity and yield loss.

## Join the green army against DBM!

### Catch male Diamondback Moths before they breed

DBM-ENEMY™ is a highly targeted, pheromone-based lure and trap system designed for precision monitoring and population suppression of the Diamondback Moth (*Plutella xylostella*).

Each unit contains a rubber septum lure, pre-infused with a potent, species-specific DBM sex pheromone blend that mimics the natural scent of female moths to selectively attract males.

These males are captured on the sticky delta traps or water traps, preventing them from mating and reducing the next generation of larvae responsible for damaging brassicas.

## Key Benefits

**Species-Specific:** Only attracts DBM males; harmless to bees, predators, and other beneficials.

**Chemical-Free:** No sprays, no residues; meets organic certification standards.

**Early Warning & Suppression:** Detects moth flights before damage appears; mass-trapping option for population reduction.

**Long-Lasting:** Lure efficacy for 6–8 weeks; trap hardware is reusable.

**Farmer-Friendly:** Simple hang-and-monitor design; no mixing or equipment needed.

**Resistance Management:** Complements biological and cultural controls without adding chemical pressure.

## Recommended Traps



*Water trap*



*Wing trap*



*Delta trap*

## Trap Density

4 - 5 traps per hectare for monitoring.

5-10 traps per hectare for mass trapping.

**Contact us** for Precision pheromone trapping for healthier brassicas—naturally!



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