



# The Pennsylvania IPM Program



## Darkling Beetles: IPM Considerations

Notes from the SWAT team

Darkling Beetles, also known as the **lesser mealworm** (*Alphitobius diaperinus*) is a common pest of poultry housing. While not a threat to humans, these insects can cause damage to buildings and become possible physical vectors to poultry diseases.

### Scouting / Inspection:

Visual inspection can be seen near areas of spilled feed or under manure crusts in floor and pit type poultry housing. Both adults and larvae can be readily seen. The use of a beetle trap can help quantify populations inside the house.

### Weigh options of control and apply accordingly:

How many beetles do you have? The IPM approach recommends that multiple methods be used to combat insect populations, and that management efforts be tailored to the population severity. Available controls include (in order of preferred IPM use):

- **Clear and clean** – Pick up all trash, animal droppings carcasses and other food sources of beetles. Remove poultry litter and manure from housing after high counts are found whenever possible. Pick up spills of feed, eggs and other protein materials to prevent further nesting of beetles.
- **Physical Barriers** - There have been some success in the use of special plastic “beetle boards” that help prevent beetle migration throughout housing. Concrete stub walls aid in the prevention of beetle damage to wood support posts.
- **Compost** – Composting poultry litter and manure before field applications may help to reduce beetle populations. Windrow litter either in-house if to be used again or outside under plastic sheeting to generate enough heat to reduce larval populations.
- **Freezing** – Darkling beetles do not fare well in temperatures below 30°F. Draining waterlines and allowing a building to sit idle and clean during winter may prove beneficial to controlling beetle populations.
- **Chemical Controls** – Use as a last resort to help reduce beetle resistance to chemicals. Be sure to follow all instructions and apply only as needed. Do not use pesticides near food or other highly sensitive areas. Be sure to dispose of containers properly. Common rotations of chemicals may be needed and typically come from the following classes of compounds:

Cyfluthrin – Countdown, Tempo – sprays and baits  
Organophosphate – Rabon, Vapona Ravap EC

Carbaryl – Sevin wettable powders / dusts and baits  
Borates – Safe Cide

When using chemical controls be sure to test the pH of water used in sprays. Some sprays actually will perform better in slightly acid solutions. Use a spreader / sticker (adjuvant) to make a spray tacky for surface sprays in poultry housing.

### **Review and Consider:**

After two weeks of applying a new control, review how well the control is working by observing trap counts. Adjust the management program as necessary.

By using an IPM program you systematically work through a plan to anticipate and control beetle numbers without using strong chemicals unless warranted. Adherence to IPM approaches typically reduces the cost of control. In addition, the IPM steps outlined above continue to perform even when the homeowner is not there.

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**SWAT** – Is an integrated team of extension educators, industry, and farm individuals interested in animal IPM and the control of flies in rural and suburban locations. For more information on IPM, please review the PA IPM website at: <http://paipm.cas.psu.edu/index.html>

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