

Controlling Darkling Beetles and Rodents

Implementing effective darkling beetle and rodent control programs is a cost-effective way to improve performance. Darkling beetles and rodents can be costly to poultry operations due to:

- Destruction of insulation and wooden structures in the house
- Poorer weight gains and feed conversion ratios
- Increased disease problems and mortality

Applying Darkling Beetle Insecticide

- Apply the label recommended amount of each insecticide. **Using less than the recommended amount will lead to increased resistance to the insecticide.**
- If large populations of beetles are present, apply insecticide before placement of each flock to keep the beetle populations under control.
- If using an Organophosphate or Pyrethroid, add 1 packet of Citric Acid or another acidifier to each insecticide tank mix before applying the material. These insecticides kill more beetles when they have an acid added to the tank mix.
- If using a Spinosad, add 1-2 ounces of clear household ammonia per gallon of tank mix.
- If using a neo-nicotinoid class of insecticide, such as Imidacloprid no tank additives are necessary.
- Rotate products utilizing a minimum of four different classes of insecticide per year.
- Apply the insecticide using as little water as possible, as recommended by the manufacturer.
- Change nozzle tips to a flat fan, 04-08 nozzle tip, to get a fine mist instead of a coarse spray application.
- Do Not apply insecticide to the entire house.

- Focus the insecticide applications to the areas where the beetles are living when the birds are in the house for much better control:
 - › 3 foot wide band under the feed lines
 - › 3 foot wide band along the walls, including the footing
 - › 2 feet up onto the wood above the footing
- Apply the insecticide on top of fresh shavings after clean out or on top of the litter after caking out. The beetles crawl on top of the litter as they are making their way to the feed line areas after bird placement. Results are not as good if insecticide is applied on the bare floor.
- Prior to clean out apply a wall treatment such as Permethrin 10% to prevent beetles from retreating to the walls during clean out.
- After clean out or caking out, apply the insecticide currently used in rotational program to any litter stored in the stacking shed. This will prevent the beetles from migrating back into the houses.

How Well is the Insecticide Working?

- The number of beetles killed in the first 24 hours is not the best indication of the insecticide's efficiency. Some insecticides may not work as quickly but have more consistent results during the entire grow out.
- You have good control if there are only a few beetles and larvae present under the feed pans when the birds are 4 weeks old and near the end of the flock.

Rodent Control Procedures at Cleanout

- Immediately after depopulating the houses:
 - › Use a “quick kill” product such as zinc phosphate.
 - › Place shallow trays (egg flats work well) 40 feet apart along the walls.
 - › Place one tray at each end door.
 - › Put bait in each tray as recommended by the manufacturer.
- Check and replenish the bait in the trays every day for at least 5 days.
- At any time during cleanout place bait in the attic space of the house.
- Liquid bait can be used if no water is present in the barn during down time.
- Just prior to bird placement, pressure wash all bait stations, allow them to dry and replenish with fresh bait.

Rodent Bait Station Placement

- For all turkey houses, place outside bait stations one every 40 feet and two on each end.
- If cool cells are being used, place 2 stations in each access area.
- Attach outside stations in an upright position to the footings or walls, $\frac{3}{4}$ inch above the ground using contractors adhesive. This keeps the stations in the most advantageous spots and allows them to be cleaned with a portable power washer.
- Place inside stations one for every 20 feet of exposed wall.
- Place stations in each building / room where rodents could enter, e.g. equipment room, storage shed, entry building, break room, etc.

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Rodent Bait Station Maintenance

- Treat bait stations as if they are harboring disease – they should only be handled at the end of the day and when wearing gloves.
- Keep bait stations clean and free of insects and excessive dirt.
- Keep bait fresh and dry.
- Check stations at least monthly and keep a record of rodent activity and bait consumption.
- Monthly cleaning – caution should be used during cleaning, as rodents can carry salmonella and other diseases. Contents should never be emptied where it can contaminate birds.
 - › Open all bait stations and remove the bait.
 - › Clean the inside of the bait stations using a dry rag or a stiff bristled paintbrush.
 - › Contain and carefully dispose of removed contents to avoid spreading disease.
 - › Replenish with fresh bait as necessary to maintain manufacturer’s recommended supply.
- All bait stations should be thoroughly cleaned or pressure washed at least once per year.

Rodent Prevention

- Do not allow the accumulation of materials, trash or other debris in and around the farm.
- Avoid and immediately clean-up any feed spills.
- Avoid and repair leaking plumbing or other sources of standing water.
- Eliminate holes, cracks and other openings where rodents might enter houses.
- Maintain a “vegetation-free” zone at least 36 inches around all barns and control all grass and weed growth.
- Rotate bait using different active ingredients at least three times per year to avoid rodents from becoming “bait shy”.

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